

MICHIGAN BOARD OF BOILER RULES
Okemos Office Conference Room 3
September 11, 2007
9:30 A.M.
*** A G E N D A ***

1. Call to order and determination of quorum J. Day
2. Announcements J. Day
 2008 Board Schedule Attached
3. Approval of March 19, 2007 minutes J. Day
 June Board Meeting was Canceled.
4. New Business
 - A. Woodcrest Condo Asso. Request for exemption of CSD-1 (Document BLR2007-14) R. Aben
 - B. David B. Garwood (Document BLR2007-15) R. Aben
 - C. Dept. of Corrections request for 24 month cert (Document BLR2007-16) R. Aben
 - D. Verso Paper request for certificate extension (Document BLR2007-17) R. Aben
5. Review of Chief Inspector's recommendations for issuance of licenses for Repairers and Installers. June and September 2007 Examinations (Document BLR2007-20) R. Aben
 To be handed out at meeting
6. Nuclear Activity Reports (No Report)
7. Re-qualification of Section 23 (No Applications)
8. Accident Statistics (Document BLR2007-19) R. Aben
9. Violations Issued (Document BLR2007-18) R. Aben
10. Legislative Update (See Chief's Report) R. Aben
11. Old Business
 - A. Financial Report (No Report)
 - B. Chief Inspector's Report (Document BLR2007-21) R. Aben
12. Public Comment
13. Next Meeting – December 11, 2007
14. Adjournment

**MICHIGAN BOARD OF BOILER RULES
DEPARTMENT OF CONSUMER AND INDUSTRY SERVICES
BUREAU OF CONSTRUCTION CODES**

Conference Room #3
2501 Woodlake Circle
Okemos, Michigan 48864

MINUTES
March 19, 2007
9:30 a.m.

MEMBERS PRESENT

Mr. Joseph Day, Chair
Mr. Roger Jenkins, Secretary
Mr. Caraway
Mr. Jacobs
Mr. Dennis Rupert
Mr. Curt Songer
Mr. Neil Vierson
Mr. Frank Wiechert

MEMBERS ABSENT

Mr. Richard Kirsch, Vice Chair
Mr. Jeffrey Appel
Mr. Larry Black

MI DEPARTMENT OF CONSUMER & INDUSTRY PERSONNEL ATTENDING

Mr. Robert Aben, Chief, Boiler Division
Mr. William Vallance, Assistant Chief, Boiler Division
Ms. Lisa Rambo, Office Supervisor, Boiler Division

OTHERS IN ATTENDANCE

Bruce Block, Representing Sappi Fine Paper
Terry Westphal, Representing Sappi Fine Paper
Leonard Werde, Representing DPI Alpena
Jim Memz, Representing DPI Alpena
Jerry Elmlblad, Representing MDOC

1. **CALL TO ORDER AND DETERMINATION OF QUORUM**

The meeting was called to order at approximately 9:30 a.m. by Mr. Day. A quorum was determined present at that time.

2. **APPROVAL OF MINUTES**

A **MOTION** was made by Mr. Songer, and supported by Mr. Vierson to approve the minutes of the December 12, 2006 board meeting. **MOTION CARRIED.**

March 19, 2007

3. **ANNOUNCEMENTS.**

Board members Larry Back and Richard Kirsch notified the division of their absents in advance. Mr. Black provided comments on the agenda items. The comments were discussed by the board and were resolved. See attachment 1 to the minutes for Mr. Black's comments.

4. **NEW BUSINESS – ROBERT ABEN**

Covanta Energy request for extension. Document BLR2007-01.

Recommending a motion to grant a certificate extension at, Covanta Energy for boiler R355668, requesting to extend the certificate until March 30, 2007. Boiler R355669 requesting to extend the certificate until May 6, 2007. (Document BLR2007-01)

A **MOTION** was made by Mr. Songer, and supported by Mr. Jacobs to approve certificate extension dates of March 30, 2007 and May 6, 2007, Covanta Energy for boilers R355668 and R355669. Document BLR2007-01. **MOTION CARRIED.**

Sappi Fine Paper request for extension. Document BLR2007-02.

Recommending a motion to grant a certificate extension at Sappi Fine Paper for boiler R350787, requesting to extend the certificate until October 2007. (Document BLR2007-02)

A **MOTION** was made by Mr. Vierson, and supported by Mr. Jacobs to approve certificate extension date of October 2007, Sappi Fine Paper boiler R350787. Document BLR2007-02. **MOTION CARRIED.**

DPI Alpena Power request for extension. (Document BLR2007-03)

Recommending a motion to grant a certificate extension at DPI Alpena Power for boilers R026437, R026438, and R032732, requesting to extend the certificate until May 23, 2007. (Document BLR2007-02)

A **MOTION** was made by Mr. Jenkins, and supported by Mr. Rupert to approve certificate extension date of May 23, 2007, DPI Alpena Power boilers R026437, R026438, and R032732. Document BLR2007-03. **MOTION CARRIED.**

5. **REVIEW OF CHIEF INSPECTOR'S RECOMMENDATIONS FOR ISSUANCE OF LICENSES FOR REPAIRERS AND INSTALLERS. - ROBERT ABEN**

The board reviewed the December 2006 examinations results. Document BLR2007-04.

A **MOTION** was made by Mr. Songer, and supported by Mr. Caraway to approve issuance of a license for the individuals that passed the December 2006 examination. Document BLR2007-04. **MOTION CARRIED.**

6. **NUCLEAR ACTIVITY REPORTS – ROBERT ABEN**

No Report

7. **RE-QUALIFICATION OF SECTION 23 – ROBERT ABEN**

Board reviewed a request for Section 23 Exempt status for Department of Corrections, Riverside. Document BLR2007-05.

Recommending approval for Department of Corrections, Riverside section 23-exemption status for repairs to threaded boiler external and non-boilers external piping at its 777 Riverside Drive, Ionia, facility for a period of three years to expire on December 14, 2009 or continue until the next review can be conducted.

A **MOTION** was made by Mr. Caraway, and supported by Mr. Rupert to approve the Department of Corrections, Riverside Section 23 exempt status. Document BLR2007-05. **MOTION CARRIED.**

Board reviewed a request for Section 23 Exempt status for Department of Corrections, Jackson. Document BLR2007-06.

Recommending approval for Department of Corrections, Jackson section 23 exemption status for repairs to threaded boiler external and to non-boiler external piping at its 3955 Cooper Street, Jackson facility for a period of three years to expire on August 29, 2009 or continue until the next review can be conducted.

A **MOTION** was made by Mr. Caraway, and supported by Mr. Rupert to approve the Department of Corrections, Jackson Section 23 exempt status. Document BLR2007-06. **MOTION CARRIED.**

8. **ACCIDENT STATISTICS – ROBERT ABEN**

(Document BLR2007-08) To be handed out at June, 2007 board meeting.

9. **VIOLATIONS ISSUED – ROBERT ABEN**

The board reviewed the file for Document BLR2007-09.

Received and Filed.

10. **LEGISLATIVE UPDATE**

See Chief's Report

11. **OLD BUSINESS - ROBERT ABEN**

a. Financial Report – **No Report**

b. Chief Inspector's Report – Robert Aben. Document BLR2007-10.

Attachment 1: Steam Main Weld Replacement Order No. 1063-07880.
Daimler Chrysler Corporation.

Attachment 2: Michigan Boiler Rules, Fee increase for license, permits,
certificates, and inspections.

Attachment 4: House Bill No. 4216

Attachment 5: Proof of service copy of statement of Intent to commence
proceedings and notice of opportunity to show why such proceedings should
not be commenced pursuant to the Forbes Mechanical Contractors Act.

12. **PUBLIC COMMENT**

No Report

March 19, 2007

13. **NEXT MEETING – JUNE 12, 2007 CONFERENCE ROOM #3.**

14. **ADJOURNMENT**

A **MOTION** was made at 11:40 a.m. by Mr. Vierson, and supported by Mr. Jacobs to adjourn the meeting. **MOTION CARRIED.**

Approved: _____ Date _____
Chair

Bureau of Construction Codes
MEETING ATTENDANCE REPORT

Date: March 19, 2007

[illegible]




JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LABOR & ECONOMIC GROWTH
LANSING

KEITH W. COOLEY
DIRECTOR

August 21, 2007

Document BLR2007-14

To: Members, Board of Boiler Rules
From: 
Robert J. Aben Jr.
Subject: Woodcrest Condo Asso. Request for Exemption from the requirements of
ASME Code CSD-1.

Attached please find for your consideration correspondence from subject documenting their justification for exemption from the requirement of rule R 408.4027 (3) for annual inspection. There are 44 identical boilers located at this complex that are presently inspected by FM Global Insurance. The Btu/hr input is recorded as 43,800 and the safety relief valves are set at 30 psi with a relieving capacity of 510,000 Btu/hr. All of these units were installed in 1981 and are located on the outside of the buildings.

Providing for Michigan's Safety in the Built Environment

Bureau of Construction Codes/Boiler Division
P.O. BOX 30254 • LANSING, MICHIGAN 48909
www.michigan.gov • (517) 241-9334

Boiler: R333880 Address: 505 JOHN ANDERSON CT-MONROE 58
 Status: ACTIVE OWNER: WOODCREST CONDOMINIUMS
 Date: 01/01/1981 Back Stop

First Inspection Information

First Inspection Date: / / Date Installed: 01/01/1981
 Boiler Use: HWH Hot Water Heat
 Other #: 2032 Code: 1 (1=NB, 2=MFG)
 Pressure Allowed: 30 S V Pressure: 30
 Insurer Number: 1 HARTFORD STEAM BOILER
 Inspector Number: 300474 JOHN J FRONCE NB Commission Number 0
 Owner Name: WOODCREST CONDOMINIUMS
 Business Nature: CONDOMINIUMS
 Specific Location: WALL County: 58 MONROE
 Construction Type: 1 (1=Wld, 2=Rvt, 3=Lap, 4=Mech) Boiler Type: 2 (1=FT, 2=WT, 3=Cl, 4=Other)
 Manufacturer: NEGEA ENERGY Year Built: 1980
 Fuel Type: GAS Method of Firing: AUTO Pressure Gage(Y/N): Y
 Low Water Cutoff: FL SWITCH With Manhole(Y/N): N
 Power Boiler Surface: 0 Heat Surface: (1=Stamped, 2=Computed)
 MRSVC Based On: 1 (1=Stamp, 2=BTU, 3=Grate Area) LBS/BTU: B Total LBS/BTU: B
 Max Design Steaming Cap: 510,000 MRSVC: 510,000 Total Cap SVC: 535,000
 Permit #: Permit Type:
 Contact Person: Phone:
 Contractor License#: Class:

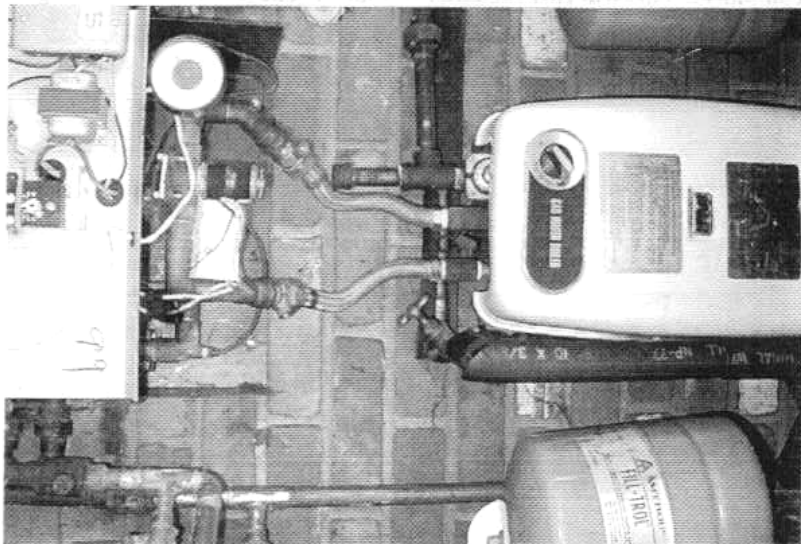
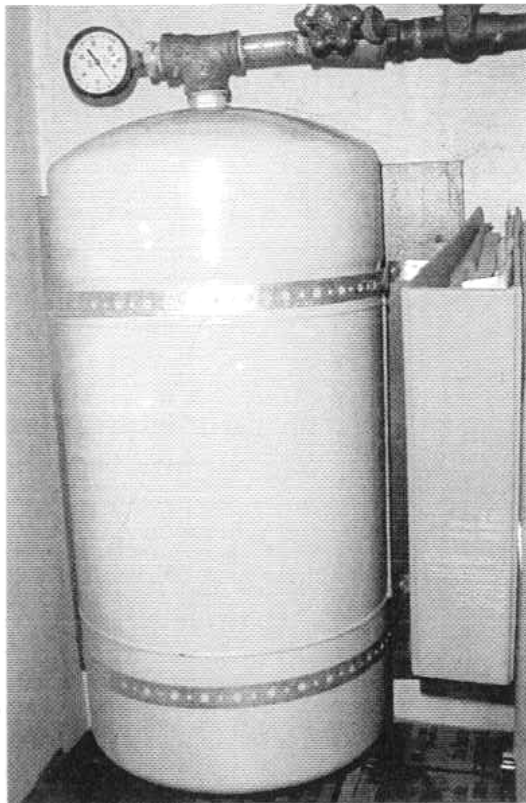
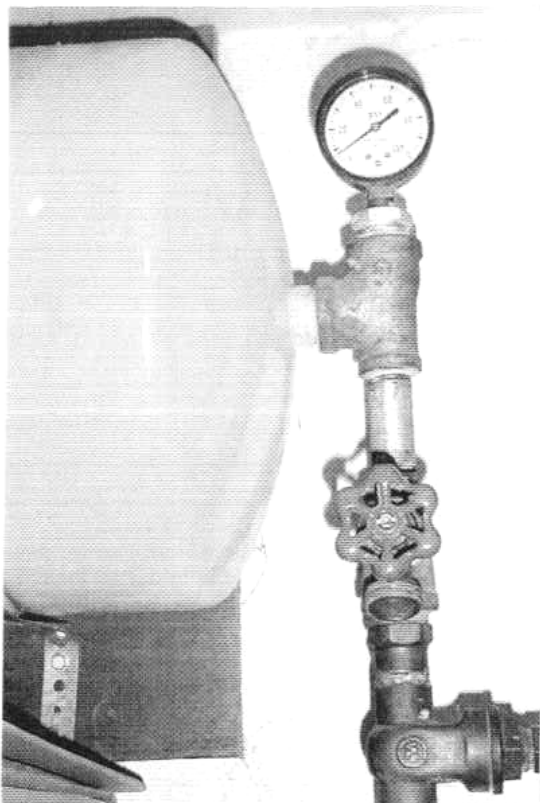
Boiler: R333880 Address: 505 JOHN ANDERSON CT-MONROE 58
 Status: ACTIVE OWNER: WOODCREST CONDOMINIUMS
 Date: 01/01/1981 Back Stop

Inspection Information

Current Inspection Information (Invoice/Certificate O=Own, L=Loc)
 Date: 05/30/2007 Mail Code: 3 (1=O/L, 2=L/O, 3=O/O, 4=L/L)
 Batch #: REINSP Boiler IAB: (I or Blank) Class: MC-3 Boiler Status: ACTIVE
 Multiple: N Issue Invoice: Y Inspection Cycle: 3 Bill Ins
 Rule 27 - Test Procedure(Y/N/NA): N Int/Ext: 2 (1=Internal, 2=External)
 LBS/BTU: B (L=LBS, B=BTU) Next Inspection Due: 05/29/2010
 Total Cap SVC: 535,000 Rule 507 Inspection: / /
 Next Rule 507 Due: 2010
 S V Pressure: 30
 Pressure Allowed: 30
 Max Design Steaming Cap: 510,000
 MRSVC: 510,000
 BTU/HR Input: 43,800
 Inspector #: 300429 MATT HERMESMEYER
 NB Commission Number: 8851
 Insurance Co #: 200 FM GLOBAL
 Invoice#: BLR0617048

Inspection Information

Date	Rule 27	MC	IAB	I/E	L/B	Total Cap SVC	Insp #	Ins Co #	Invoice #	Batch #
05/26/2004	NA	3		2	B	0	300474	1	BLR0538465	REINSP
05/22/2002	Y	3		2	B	510,000	300474	8082	BLR0472855	2176HA
06/13/2000	Y	3		3	B	510,000	300474	8082	BLR0404407	0178HB
04/23/1998	Y	3		2	B	510,000	300864	8082		8124HA
/ /		0		0		0	0	0		



**From: Woodcrest Condo Assoc.
539 John Anderson Ct #94
Monroe, MI 48162**

**To: Robert J. Aben
Chief, Boiler Division**

June 27, 2007

Mr. Aben,

We are writing to ask if there is anyway that the Home Owner's at Woodcrest Condo's can get relief from Code CSD-1. They own their boiler and pay to have it repaired.

You were at Woodcrest Condos in Sept 1997 and met with the owners and the Board of Directors. As you may recall Mr. Lynn Owens the State Rep was with you. At that time you told the owners present, the only reason was the way the boilers were installed. There are six boilers on one side of the building and four on the other side.

Our question is why do they have to have a yearly check by a heating company? This will cost each owner \$83.00. These boilers have a high limit of 160 degrees and an operating press of nine pounds. The fluid capacity is three to five gallons, depending on the number of bedrooms in a unit.

Mr. Diedrich has checked these boilers each Sept. for the last 20 years to make sure the 160 degree limit is working and that the pressure relief valves work properly.

Enclosed please find a book on the boiler that is here at Woodcrest Condo's.

Thank you,

Allan Diedrich Pres.
Woodcrest Board of Directors

Paloma-Pak

STYLE-B

Gas Fired Boiler

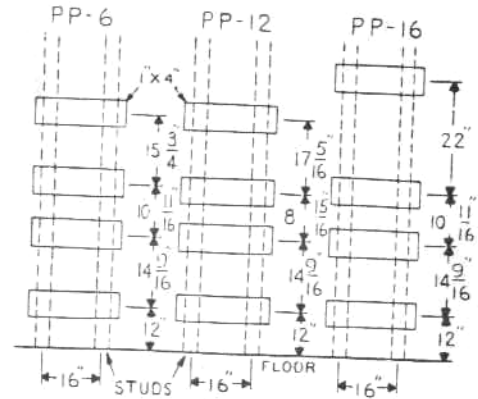
Installation Guide



PROCEDURE FOR INSTALLATION OF THE CONTROL MODULE AND SUPPORT BRACKET

1. The preferred location is to mount the unit directly on the chimney to keep venting connections to a minimum, and to conserve space.

2. In the event that a closet or alcove location is desired, it is probable that the supporting walls will be of the wood frame type with verticle wall studs. Mounting the Paloma-Pak in this manner will require (4) 1" x 4" straps secure, fastened across at least two of these studs. These straps must be installed first and should be nailed parallel to the floor and spaced on the centers shown in the sketch below. With the 0" wall clearance allowed by AGA it will not be necessary to add any non-combustible surface to protect these supports.



MODEL	A	B	C	D	E	F
PP-6	2"	10 11/16"	-	-	-	-
PP-12	-	-	2 3/4"	8 15/16"	-	-
PP-16	-	-	-	-	4"	10 7/16"

3. Once the mounting location is prepared, both cartons should be opened. Remove the black bracket from the Paloma Unit Carton and the spacer-plate and control module from the second carton.

NOTE: On Model PP-6 this bracket is permanently attached to the back of the Paloma Unit.

4. Remove the front cover from the control module.
5. Mark the centers for the black bracket on mounting surface and insert shields or other attachment devices in that surface. See Figure #1
6. Secure the black bracket to the surface with the spacer plate suspended from the bottom segment of the wall bracket through matching bolt holes.
7. Secure the control module to the bottom of the spacer plate through the matching bolt holes.
8. Securely fasten the control module to the mounting surface. Use shims where necessary on irregular surfaces
9. The Paloma Unit can now be attached to the Bracket as shown in Figure #1
10. Separate the Union Connections on the ends of the Flexible Tubes, taking care not to damage or lose the gaskets inside. Attach the two Adapters to the Respective 3/4" Fittings in the Control Module and secure the unions.

The unit is now ready for all piping and wiring connections. These should all be made with the cover removed.

Connect the system supply and return, gas and cold water makeup. See Figures 2 & 3.

The lower right 3/4" connection is directly from the pump to the system supply.

The upper right 3/4" connection is for the system return.

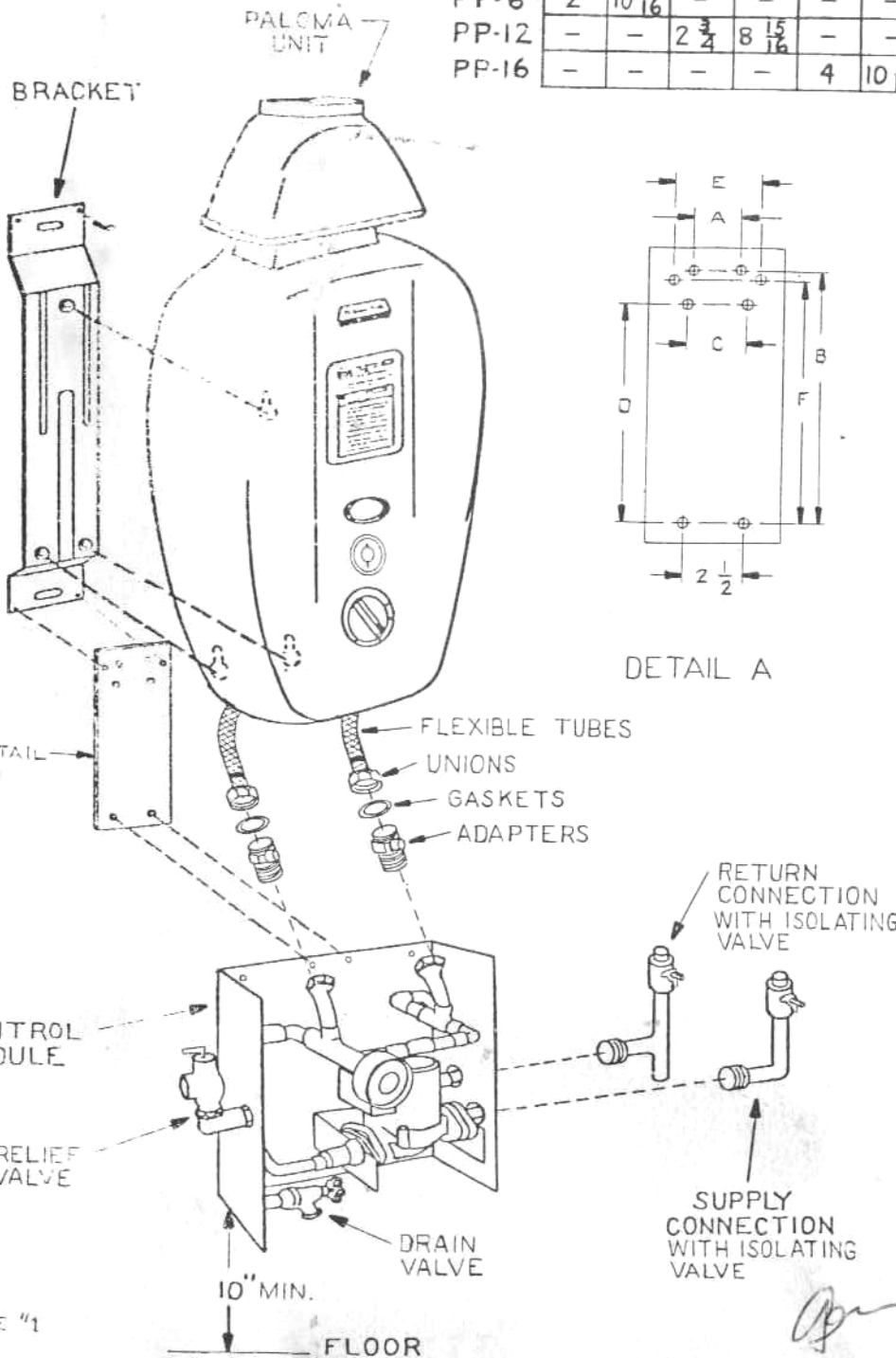


FIGURE "1"

IMPORTANT - A by-pass valve must be installed around the make up water valve for purging as shown in Figure #2.

A. Attach the appropriate ball valve fittings to the matching unions on the module. A dirt leg is furnished in the return fitting for overhead systems. Both connections can be rotated for down-fed systems if the piping is below the boiler.

B. In the event that replacement of any of the controls, pump, or solenoid valve body is required, these ball valves can be closed to the system and the small amount of water drained from the module without draining the entire system. This eliminates the need for extensive air venting or purging the entire system.

C. Connect a discharge tube from the relief valve on the left side of the module. This open ended tube shall be run to a point 12" above the floor, or as required by local codes. Do not thread the end of the tube. Also do not plug or cap the end in any manner.

D. A diaphragm-type expansion tank should be mounted in the common portion of the supply piping. This tank must be supported from the structure of the building.

A pressure reducing valve equipped with rapid fill capability must be installed in the supply line along with a union, stop and waste valve, and, when required by local codes, a back-flow preventer valve upstream of the tank. An air scoop and automatic air eliminator should also be installed in conjunction with the expansion tank and reducing valve upstream of any zone branches. Cold-start pressure normally is 12 PSIG and this pressure will rise to 22-24 PSIG at operating temperatures. A check should be made that cold-start pressure remains constant.

IMPORTANT - CAUTION ON EXTENDED SYSTEM PIPING.

In the rare instances where the longest single run of mains and series connected baseboard (from the boiler and back to the boiler) exceeds 200 equivalent lineal feet an auxiliary pump must be added to the supply system beyond the Paloma-Pak. We stress that this is ONLY the longest single run - not the total of all the piping in the system. This is true of any boiler system and is mentioned only to forestall any problem in not having enough pump "head" to properly flow against such an excessive friction loss. It is seldom that a residential system reaches this equivalent length. To help check this condition the following table is furnished.

TABLE — 1

Fitting Equivalent Length of Tube in Feet (3/4" Copper Tube.)

Total Number	1	12	25	36	48
90° Ell	1.25	15'	30'	45'	60'
45° Ell	.75	9'	18'	27'	36'
Tee Side Branch	2.00	24'	48'	72'	96'
Tee Straight Run	.4	5'	10'	15'	20'
Coupling	.4	5'	10'	15'	20'
Gate Valve	.25	—	—	—	—
Globe Valve	10.00	—	—	—	—

EXAMPLE: 12 Branch tees x 2.00 = 24' Equivalent
 24 Ells x 1.25' = 30'
 12 Couplings x .4' = 5'
 59'

ZONES:

The special pump in the Paloma-Pak performs the dual function of providing, first, the 11' feet of head necessary to lift the diaphragm in the unit to ignite the burners and, second, to have an additional 7' feet of head to pump the water through the average heating system. The 7' feet additional corresponds very closely to the average circulator now used in thousands of hot water systems.

Because of this pump capacity we recommend that zoning be done through thermostatically-controlled zone valves, rather than by additional circulators.

The possibility is that the excess head of the Paloma-Pak pump operating in-series with conventional zone pumps will cause unwanted flow in zones not calling through their thermostats and flow checks.

We do not recommend any particular manufacturer of zone valves. This is best left to the installer who is familiar with valves predominant in his area with consideration to service and availability. Zone valves should be mounted on the return piping and supported from the structure.

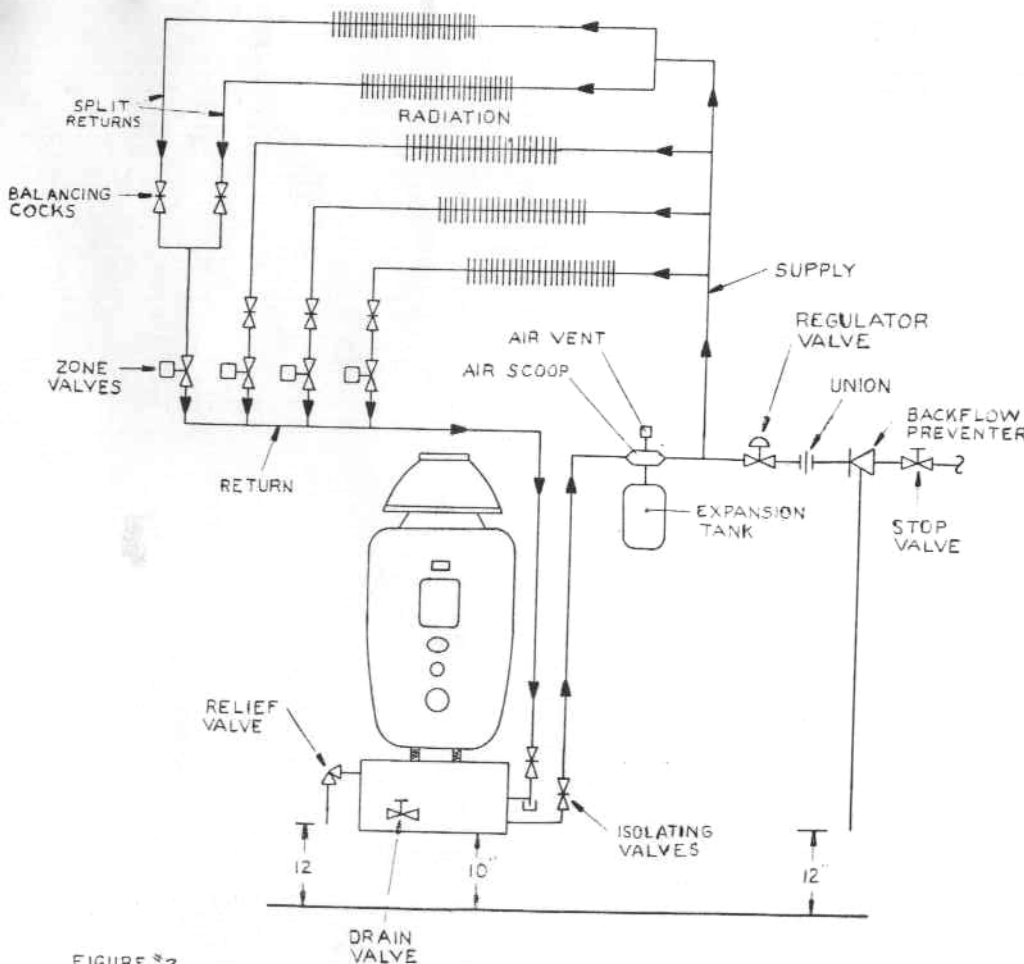


FIGURE #2

GAS PIPING

1. Installation of gas piping shall conform to ANSI-Z223.1 1974 standard.
2. Installation shall conform to all applicable local codes and shall be tested and approved by local authorities having jurisdiction. Inlet pressures shall be set to name plate requirements.
3. An approved shut-off gas cock located remote from the unit is required and shall be installed in the gas piping according to code requirements.
4. At the point of connection of the gas supply to the unit, it is required that a drip connection be installed in accordance with local codes.
5. A full size flue connection from the discharge of the integral diverter on the unit shall be made with no alteration of diverter construction. Where two or more gas appliances are connected to a common chimney or vent, the equivalent area of the chimney or vent should be at least equal to the equivalent area of the vent outlet on the largest appliance plus 50 percent of the equivalent area of the vent outlet on the additional appliance.
6. All pipe joint compound shall be resistant to the corrosive action of liquified Petroleum gases.
7. Check all gas connections for leaks: Use a soapy solution only for checking piping connections. Do not check with open flame.
8. The meter shall be clocked (with all other gas burning devices turned off) to insure that the input matches name plate data.
9. An appliance regulator is located within the Paloma unit. After adjustment of the inlet pressure this regulator should be adjusted to name plate rating. A manometer tap is provided above regulator.
10. On initial start-up the gas service line shall be purged until clear of air and the unit shall be cycled several times to insure dependable operation.
11. Provisions must be made to supply sufficient clean air to the boiler room at all times for combustion, ventilation, and for dilution of the combustion gases at the draft diverter. In buildings of conventional construction without enclosed utility rooms, basement storm windows, or tight stair doors, infiltration is normally adequate to provide for proper boiler room ventilation. Should the available air supply for the boiler room prove to be inadequate, make-up air must be admitted to the boiler room. When the make-up air supply is admitted to the boiler room directly from the outside, the outdoor opening must have a minimum of one (1) square inch for each 4,000 BTU per hour of boiler input. When the make-up air supply is admitted to the boiler room from within the building, an opening near the bottom and one near the top of the boiler room will be required: Each opening must have a minimum of one (1) square inch for each 1,000 BTU per hour of boiler input.
12. See Figure 3 as a guide to proper gas pipe sizing.

FLUE SIZES

Model PP-6 = 4"
Model PP-12 = 5"
Model PP-16 = 7"

Pipe Delivery Schedule						Additional Length of Pipe to Be Added for Each Elbow or Tee Bend in Piping	
*Adjusted Length of Gas Supply Piping in Feet	**Capacity of Pipe Sizes in Cubic Feet of Gas Per Hour					Pipe Size in Inches	Additional Length of Pipe in Feet
	½"	¾"	1"	1¼"	1½"		
10'	132	278	520	1,050	1,600	½"	1.3
20'	92	190	350	730	1,100	¾"	1.7
30'	73	152	285	590	890	1"	2.2
40'	63	130	245	500	760	1¼"	2.9
50'	56	115	215	440	670	1½"	3.3
75'	45	93	175	360	545	—	—
100'	38	79	150	305	460	—	—
150'	31	64	120	250	380	—	—

*Include measured length of gas supply piping and allowance in feet for number and size of fittings.

**Capacity is given for Pipe of Different Diameters and Lengths in Cu. Ft. Per hour with Pressure Drop of 0.3 Inch and Specific Gravity of 0.60.

FOR SPECIFIC GRAVITY OTHER THAN .60 MULTIPLY C.F.H.

Example:					
Gravity	.45	.50	.55	.65	.70
Multiplier	1.16	1.10	1.04	.926	.926

FIGURE *3

SYSTEM PURGE:

1. Power "OFF"-Gas Cock closed-"OFF"
2. Open city water supply to expansion tank. Allow to fill until pressure gauge reads 12 psig+. Connect a hose from city water to drain cock at bottom of supply outlet to provide ample quantity and pressure to purge heating system. Observe pressure gauge and be sure that pressure does not exceed 25 psig (to prevent relief valve opening).
3. Unscrew the large cap on top of the pump and vent the air in the pump until water appears.
4. Turn thermostat(s) down so that none calls for heat. This is important to prevent unwanted opening or closing of zone valves during purging.
5. Close valve in the left hand pump intake flange (slot across tube, accessible from top).
6. Attach a hose to the drain valve in the bottom of the module to purge the system.
7. Turn power "ON"-leave gas cock closed-"OFF"
8. Turn thermostat on first zone up to electrically open the first zone valve. Be sure zone balancing cock is open. Purge until clear.
9. Turn thermostat down to close the zone valve and repeat step #8 on all other zones, turning each thermostat down when purging of its zone is complete.
10. Turn power "OFF"-leave gas cock closed-"OFF". Continue to purge for approximately 30 seconds to purge the by-pass valve. Open the valve in the pump intake flange (slot aligned with the tube) to purge the remaining piping.
11. Close city water purge line. Turn power "ON". Allow system make-up valve at tank to fill until pressure gauge reads 12 psig+.
12. Disconnect all hoses; close both drain cocks.

START-UP

1. Open gas cock. Purge gas to the pilot & light (see pilot lighting instructions).
2. When pilot is established turn the knob counter-clockwise to "ON".
3. Set thermostat(s) to call for heat.
4. The boiler should now fire.

NOTE: Some zone valves have a "BUILT IN" 1 to 2 minutes delay in opening - THUS CAUSING THE SAME DELAY IN FIRING THE BOILER.

5. "Clock" the meter to see that the input is correct. A chart is provided below for this purpose.

On "retrofit" systems using cast-iron radiation there will be slower response in return temperature rise because of the relatively large amount of water contained in the system. In conventional copper tube baseboard or fan coil systems, response will be almost immediate.

As the Paloma picks up the heating load, it will begin to cycle under control of the operating control built into the return piping. The effect of this cycling is to allow water to either flow through the Paloma or to by-pass same. Thus, the unit injects precisely the heat needed to balance the rate of output of the heating system. Frequent cycling is normal.

MANIFOLD PRESSURE CHART (Full Firing)

Model	Inches W.C.
PP-6N	2.9
PP-6LP	9.0
PP-12N	3.7
PP-12LP	10.0
PP-16N	4.4
PP-16LP	8.7

Control of the system water temperature differs from the conventional boiler. In normal operation the temperature rise from inlet to outlet of the unit will range from 40° to 50° (i.e. 150° return = 190°/200° supply). Because of this, we control on the return side of the Paloma-Pak. The operating control with an adjustable temperature setting knob is installed and pre-wired in the control cabinet with the bulb in the return connection. The temperature gradients marked on the face of this control are the return water temperatures, so a "setting" of 150°F will equal 190°/200°F supply temperature.

In addition to this operating control, a fixed setting high limit control is installed and pre-wired in the supply connection, this control will shut down the entire boiler system electrically. There is no manual reset in this device so that the system must cool down to a safer temperature when power will automatically be restored and boiler operation will begin. Operation of this high limit control usually indicates either too high a setting or malfunction of the operating control. This should be checked. If reduction of the setting eliminates the problem, the system can be left to operate. If not, the operating control must be replaced.

CLOCKING NAT. GAS METER FOR INPUT (1000 B.T.U. GAS .60 SPECIFIC GRAVITY)

MODEL	DIAL	TIME
PP-6	1/2 FOOT DIAL	41 SEC.
	2 FOOT DIAL	2 MIN. 45 SEC.
PP-12N	1/2 FOOT DIAL	20 SEC.
	2 FOOT DIAL	1 MIN. 20 SEC.
PP-16N	1/2 FOOT DIAL	15 SEC.
	2 FOOT DIAL	60 SEC.

* ALL OTHER APPLIANCES CONNECTED TO THIS METER MUST BE OFF WHILE CLOCKING METER.

+ INPUT CONTROL KNOB MUST BE SET AT FULL.

GENERAL INFORMATION:

The Paloma-Pak boiler operates differently than the conventional gas boilers now available. It is this difference which, in part, is the reason the Paloma-Pak is more efficient.

There is no conventional gas valve. Ignition can only take place when water is flowing through the heat exchanger. This feature insures complete safety—there is no possibility of a "run-away or uncontrolled firing rate.

This water flow results from the operation of the integral pump. When any temperature control device in the system call for heat the automatic by-pass valve is closed, forcing the flow against a diaphragm which moves upward opening the gas inlet port to the burners. Ignition at the burners occurs from the standing pilot. Ignition will continue as long as this diaphragm is held up by the water flow.

Position of the by-pass valve is readily determined. It is a 24 volt DC solenoid, normally open, and closes when power is applied. Any steel object will adhere magnetically to the stem of the valve when powered. Therefore, if no effect is discernible the valve is by-passing; if magnetic pull is felt, the valve is closed and the Paloma should be firing.

ELECTRICAL CONNECTION

The unit must be supplied by a 120 volt single phase circuit which should be a separate 15 amp. (#14 AWG) circuit without other loads. The installation shall be made in accordance with the latest edition of the National Electrical Code and any applicable local codes. Provision for grounding the unit is made in the junction box provided in the control panel. The electrical load of the boiler will not exceed 12 amps.

Thermostat leads for a single zone installation should be wired directly to terminals TT in the Control Cabinet. For multi-zone installation, follow field wiring recommended by zone valve manufacturer and bring 2 leads from zone valve or relay back to terminals TT in the Control Cabinet.

An auxiliary control transformer must be used on multi-zone systems. Do not power zone valves from the transformer supplied with this boiler.

Line and low voltage connections can easily be made from the wiring diagrams provided with these installation instructions.

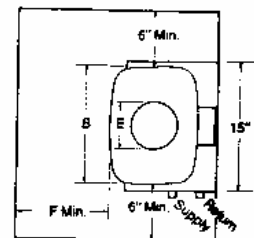
Model	BTU/Hr Input	BTU/Hr Output	Water Conn.	Gas Conn.	Lineal Ft. of Baseboard*	Ship. Weight	
						Pkg 1	Pkg 2
PP-6	43,800	35,000	3/4"	1/2"	64	22	50
PP-12	89,300	71,400	3/4"	1/2"	130	42	50
PP-16	121,500	97,200	3/4"	3/4"	176	75	50

*Based on 550 BTU/lineal foot element @ 180° A.W.T. (USE ONLY AS A GUIDE)

DIMENSIONS:

Including minimum clearances to combustible surfaces.

DIMENSIONS IN INCHES						
Model	A	B	C	D	E	F
PP-6	51 1/2"	14	10	4 1/2	4	10
PP-12	52	14	12	4 3/4	5	10
PP-16	55	19	13	6 1/2	7	12



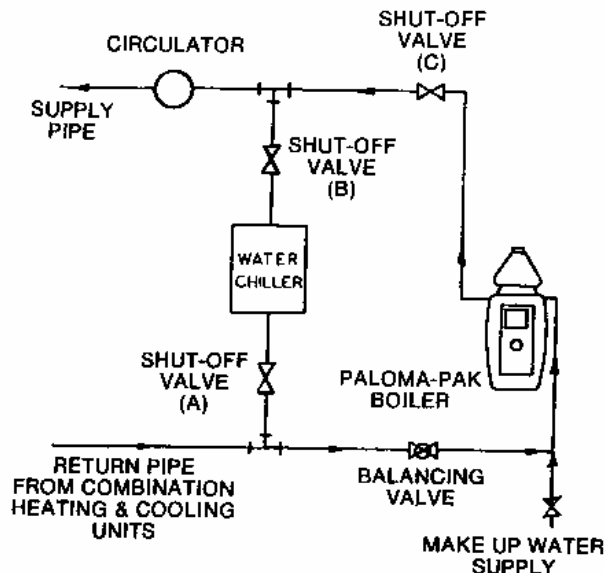
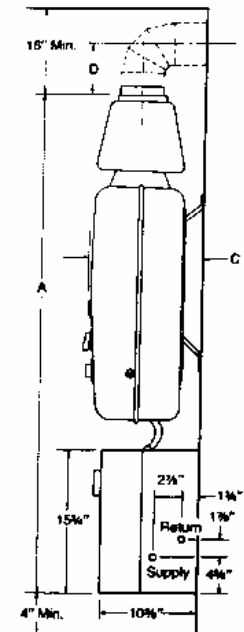
HEATING-COOLING SYSTEM

When boiler is used in connection with a water chiller, each unit must be installed so the chilled medium is piped in parallel with the heating boiler with a valving arrangement to prevent cold water from entering the boiler as shown below.

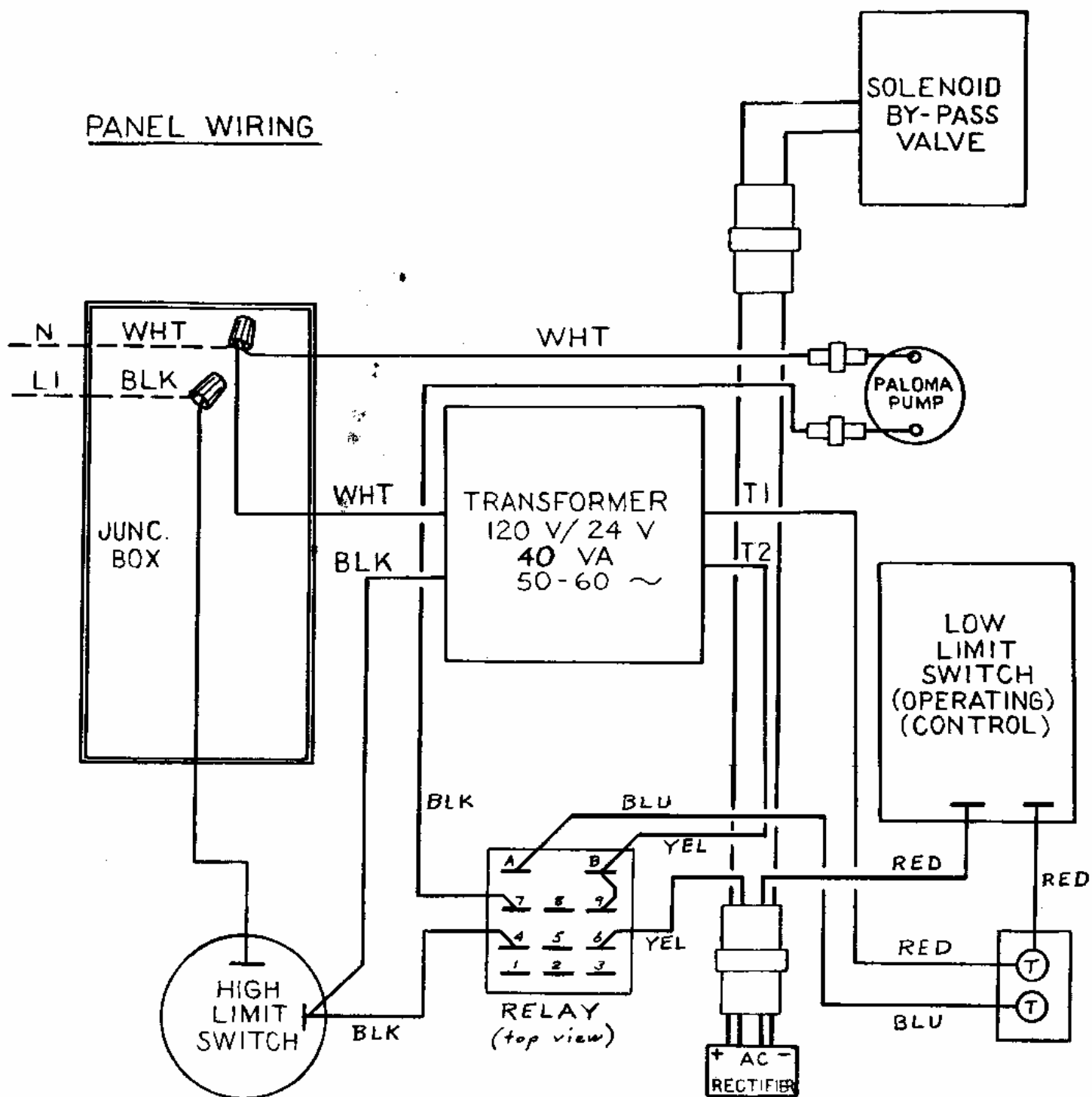
When hot water heating boilers are connected to heating coils located in air handling units where they may be exposed to refrigerated air circulation, such boiler piping system shall be equipped with flow control valves or other automatic means to prevent gravity circulation of the boiler water during the cooling cycle.

Valves May be Automatic

1. For heating: Turn on valve (C)
Turn off valves (A) and (B).
2. For cooling: Turn off valve (C)
Turn on valves (A) and (B).
3. Do not shut off make up water supply.



PANEL WIRING



Paloma-Pak

STYLE B

Negea Energy Products, Inc.

P.O. BOX 712
WORCESTER, MA. 01610
617-754-8400

TITLE: PANEL WIRING
DWG. NO. 080979

REV. NO. 5 DATE DEC. 1, 1979



JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LABOR & ECONOMIC GROWTH
LANSING

KEITH W. COOLEY
DIRECTOR

July 9, 2007

Mr. Allan Diedrich
President, Woodcrest Condo. Asso.
539 John Anderson Ct. #94
Monroe, MI 48162

Subject: Question regarding yearly check by heating company.

Mr. Diedrich:

I appreciate that you check the operability of the temperature limit switch and relief valve. These components are important to the safe operation of your boilers. However, the standard (ASME Code CSD-1) adopted into the Michigan boiler rules requires much more than just testing of the temperature limit and relief valve. That is why the boiler rules also require the annual testing to be accomplished by a licensed mechanical contractor experienced in maintenance and testing of gas fired appliances. The contractor is required to document all necessary testing on a form and submit it to the boiler owner. The owner is required to present the form to the inspector at the time of the boiler certificate inspection.

I have no authority to grant relief from this requirement however, if you wish to pursue request for relief you may do so before the Michigan Board of Boiler Rules. The next meeting is scheduled for September 11, 2007. Your request must be in my office no later than August 21, 2007 and must include your justification for the request. You should plan to attend the Board meeting on September 11 to respond directly to questions from the board members.

If you have other questions please feel free to contact me.

Sincerely,

Robert J. Aben Jr., Chief
Boiler Division

Providing for Michigan's Safety in the Built Environment

Bureau of Construction Codes/Boiler Division
P.O. BOX 30254 • LANSING, MICHIGAN 48909
www.michigan.gov • (517) 241-9334

Woodcrest Condo Association
539 John Anderson Ct #94
Monroe, Mi 48162

August 10, 2007

Mr. Robert J. Aben Jr.

This is in reference to your letter dated July 9, 2007. Where you suggested that we meet with the Michigan Board of Boiler Rules for relief of the ASMC code CSD 1.

1. These units are no more then a glorified water heater
2. They operate on 10lbs pressure and heat only to 160 degree fluid temperature.
3. The operation of this system, when the thermostat calls for heat the pump comes on and the zone valve closes. The water pushes a rubber diaphragm which open's the gas valve and the burner comes on. The fluid is circulated thru the heat exchanger (which measures 7 ½ in. wide, 5 in. deep, 8 in. high), then thru the piping in the condo. This continues until the fluid temperature is 160 degrees. Then the burner is shut down and the fluid is circulated. When the fluid cools down to 120 degrees the cycle starts again until the condo thermostat is satisfied.
4. The boiler only heats what fluid is in the ¾ in copper tubing. The supply side has fins and the return side does not. This amounts to 3 to 5 gallons of fluid. Depending on the size of the unit being serviced. One, two, or three bedroom. An accumulator tank is pressurized to 30 lbs. This supplies Constance pressure to 10 boilers. This is a closed system and is not hooked up to the city water system.

We were told by our insurance company to check the 160 degree shut off and make sure that the pressure relief valve works. This is done annually. These are Paloma-Pak PP6N boiler and is the smallest unit that this company made.

Respectfully yours,

Woodcrest Condo Association

Allan C. Dedrick Pres.



JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LABOR & ECONOMIC GROWTH
LANSING

KEITH W. COOLEY
DIRECTOR

August 21, 2007

(Document BLR2007-15)

Mr. David B. Garwood
Garwood Cooling and Heating
6820 Sober Road
Fowlerville, MI 48836

Subject: BCC Complaint No. M 05-0694

Mr. Garwood:

This letter is to inform you that based on your failure to satisfy the conditions set forth in the Settlement Agreement resulting from subject complaint signed on 02/07/2007, your boiler installer license #313590 is hereby suspended.

Sincerely,

Robert J. Aben Jr., Chief
Boiler Division

Providing for Michigan's Safety in the Built Environment

Bureau of Construction Codes/Boiler Division
P.O. BOX 30254 • LANSING, MICHIGAN 48909
www.michigan.gov • (517) 241-9334

PROOF OF SERVICE

I hereby state, to the best of my knowledge, information and belief, that a copy of the **Statement Of Intent To Commence Proceedings And Notice Of Opportunity To Show Why Such Proceedings Should Not Be Commenced Pursuant To The Forbes Mechanical Contractors Act** was served upon all parties and/or attorneys of record in this matter by Inter-Departmental mail to those parties employed by the State of Michigan and by mailing same to them via first class mail, and certified mail return receipt requested, at their respective addresses as disclosed by the file on the 8th day of January, 2007.


Karolyn Dare
Bureau of Construction Codes

David B. Garwood, d/b/a
Garwood Cooling & Heating
6820 Sober Road
Fowlerville, Michigan 48836

Timothy Colley, Mechanical Inspector
Livingston County Building Department
23000 E. Grand River Ave.
Howell, Michigan 48843

Andrea Crawford
9650 W. Pierson Road
Fowlerville, Michigan 48836

Ernest LaDoulx
P.O. Box 866
Ludington, Michigan 49431

Ellen Ray
221 Fraiser Blvd.
Harsens Island, Michigan 48028

Trooper Steve Sura
Michigan State Police Post # 12
44803 Old US-23
Brighton, Michigan 48114

Deputy P. Eggleston
Livingston County Sheriff Dept.
150 S. Highlander Way
Howell, Michigan 48843

Robert Aben, Chief
Boiler Division
Bureau of Construction Codes
P.O. Box 30222
Lansing, Michigan 48909

Tennison Barry, Chief
Mechanical Division
Bureau of Construction Codes
P.O. Box 30254
Lansing, Michigan 48909

Scott D. Fisher, Director
Office of Local Government and Consumer Services
Bureau of Construction Codes
P.O. Box 30254
Lansing, Michigan 48909

**STATE OF MICHIGAN
DEPARTMENT OF LABOR & ECONOMIC GROWTH
BUREAU OF CONSTRUCTION CODES**

In the Matter of:

David B. Garwood, d/b/a
Garwood Cooling & Heating
6820 Sober Road
Fowlerville, Michigan 48836

BCC Complaint No. M 05-0694

Mechanical Contractor License No. 71-06960
Boiler Installer License No. 31-3590

(Respondent)

_____ /

Issued and entered
this 2nd day of January 2007
by Scott D. Fisher, Director
Office of Local Government and Consumer Services

**STATEMENT OF INTENT TO COMMENCE PROCEEDINGS;
NOTICE OF OPPORTUNITY TO SHOW WHY SUCH PROCEEDINGS SHOULD
NOT BE COMMENCED PURSUANT TO THE FORBES MECHANICAL
CONTRACTORS ACT; AND NOTICE OF INFORMAL COMPLIANCE CONFERENCE
SCHEDULED FOR THURSDAY, JANUARY 25, 2007, AT 1:30 PM**

TAKE NOTICE that the Michigan Department of Labor and Economic Growth (hereafter the Department), Bureau of Construction Codes (hereafter the Bureau), pursuant to the Administrative Procedures Act of 1969, 1969 PA 306; MCL 24.201 et seq, the Forbes Mechanical Contractors Act, 1984 PA 192; MCL 338.971 et seq (hereafter the Mechanical Contractors Act), the Boiler Act of 1965, 1965 PA 290; MCL 408.751 et seq (hereafter the Boiler Act), the Stille-DeRossett-Hale Single State Construction Code Act, 1972 PA 230; MCL 125.1501 et seq (hereafter the State Construction Code Act), and the rules promulgated under the State Construction Code Act, the 2003 Michigan Residential Code (hereafter the Residential

DAVID B. GARWOOD
STATEMENT OF INTENT

Code) and the 2003 Michigan Mechanical Code (hereafter the Mechanical Code), intends to begin proceedings relating to alleged violations of the Mechanical Contractors Act, the Boiler Act, the Residential Code and the Mechanical Code which proceedings might result in the imposition of the penalties and remedies provided in the Mechanical Contractors Act unless a satisfactory response to this Statement of Intent to Commence Proceedings and Notice of Opportunity to Show Why Such Proceedings Should Not Be Commenced Pursuant to the Forbes Mechanical Contractors Act, (hereafter the Statement of Intent) is received.

THE REASONS for this Statement of Intent are:

FACTS COMMON TO ALL COUNTS

1. David Garwood (hereafter Respondent Garwood), whose address is 6820 Sober Road, Fowlerville, Michigan 48836, was, at all times relevant to this action, an individual doing business under the assumed name of Garwood Cooling & Heating, engaged in the business of installing, altering or servicing heating and air conditioning systems (hereafter mechanical systems), licensed with the Bureau as a mechanical contractor, held Mechanical Contractors License No. 71-06960 with authorization to perform mechanical work limited to the mechanical license classifications 1, 2, 4, 6 & 8; "Hydronic heating and cooling and process piping," "HVAC Equipment," "Ductwork," "Refrigeration," "Limited Heating or Refrigeration Service," and "Fire Suppression" respectively, currently scheduled to expire on August 31, 2007, and held Boiler Installer License No. 31-3590, which expired on December 31, 2005.

2. The County of Livingston was, at all times relevant to this action, responsible for the administration and enforcement of the State Construction Code Act, the Residential Code and the Mechanical Code within Conway Township in Livingston County, a governmental subdivision of the State of Michigan, and had designated the Bureau as the specific enforcing

DAVID B. GARWOOD
STATEMENT OF INTENT

agency responsible for administering and enforcing the State Construction Code Act, the mechanical provisions of the Residential Code and the Mechanical Code within Conway Township, including, but not limited to, the issuance of mechanical permits and the conduct of mechanical inspections for the purpose of safeguarding life or limb, health and public safety within this jurisdiction.

3. Timothy Colley (hereafter Inspector Colley), whose address is Livingston County Department of Building & Safety Engineering, 2300 East Grand River Avenue, Suite 104, Howell, Michigan 48843-7580, was, at all times relevant to this action, engaged in the business of performing mechanical inspections, employed as an agent for Livingston County's enforcing agency, and registered with the Bureau under Mechanical Inspector Registration No. P004702 for the 2002-2006 inspector registration cycle.

4. Clay Township was, at all times relevant to this action, responsible for the administration and enforcement of the State Construction Code Act, the Residential Code and the Mechanical Code within Clay Township in St. Clair County, a governmental subdivision of the State of Michigan, and had designated the Bureau as the specific enforcing agency responsible for administering and enforcing the State Construction Code Act, the mechanical provisions of the Residential Code and the Mechanical Code within Clay Township, including, but not limited to, the issuance of mechanical permits and the conduct of mechanical inspections for the purpose of safeguarding life or limb, health and public safety within this jurisdiction.

5. Michael Kras (hereafter Building Official Kras), whose address is Clay Township Building Department, P.O. Box 429 Algonac, Michigan 48001, was, at all times relevant to this action, engaged in the business of administering and enforcing construction laws and regulations, performing inspections, employed as an agent for Clay Township's enforcing agency, and

DAVID B. GARWOOD
STATEMENT OF INTENT

registered with the Bureau under Building Official Registration No. P004347, for the 2002-2006 inspector registration cycle.

6. From on or about November 26, 2003, through on or about July 20, 2004, Respondent Garwood engaged in or worked at the business of a mechanical contractor by offering and selling a mechanical contract to Ernest LaDoulx, on behalf of his daughter, and then installing a residential boiler heating system into the residence of Andrea Crawford at 9650 Pierson Road, Fowler, Michigan 48836, as described in Respondent Garwood's written proposal date stamped November 26, 2003 (the "Crawford Contract"), within Conway Township, an area of Livingston County jurisdiction for mechanical work, in exchange for a down payment of \$2,000 and eventual total payments of \$7,600.

7. From on or about October 2, 2005, until late October of 2005, Respondent Garwood engaged in or worked at the business of a mechanical contractor by offering and selling a mechanical contract to Ellen Ray and then partially installing a residential boiler heating system into the residence of Ellen Ray at 221 Frazier Boulevard, Harsens Island, Michigan 48028, as described in Respondent Garwood's written proposal dated October 2, 2005 (the "Ray Contract"), within Clay Township of St. Clair County, an area of Clay Township jurisdiction for mechanical work, in exchange for a down payment of \$3,000 on a \$6,000 contract.

COUNT I

PERFORMED WORK WITHOUT REQUIRED PERMITS

8. Respondent Garwood installed new boiler heating system in the residences of Andrea Crawford and Ellen Ray without first making application and obtaining required permits.

9. Failure to first make application and obtain the required permits from the enforcing agency before causing non-exempt work to be done is a violation of Section R105.1 of

DAVID B. GARWOOD
STATEMENT OF INTENT

the Residential Code and Section 10(1) of the State Construction Code Act, MCL 125.1510(1), and constitutes grounds under Section 11(1)(f) of the Mechanical Act, MCL 338.981(1)(f), for the Board of Mechanical Rules to proceed under Section 16 of the Mechanical Act, MCL 338.986, to impose sanctions.

COUNT II

FAILURE TO PAY PERMIT FEES

10. Respondent Garwood installed mechanical system equipment without first having paid the required mechanical permit fees.

11. Failure to first pay the required permit fees to the enforcing agency before causing non-exempt mechanical and electrical work to be done is a violation of Section R108.1 of the Residential Code and Section 10(1) of the State Construction Code Act, MCL 125.1510(1), and constitutes grounds under Section 11(1)(f) of the Mechanical Act, MCL 338.981(1)(f), for the Mechanical Board to proceed under Section 16 of the Mechanical Act, MCL 338.986, to impose sanctions.

COUNT III

FAILURE TO CALL FOR INSPECTIONS

12. Upon completing the rough or final portion of non-exempt mechanical work, Respondent Garwood failed to notify an enforcing agency that his mechanical work was ready for the rough or final inspections required by code.

13. Failure to notify an enforcing agency when regulated work is ready for inspection is a violation of Section R109.3 of the Residential Code and constitutes grounds under Section 11(1)(f) of the Mechanical Act, MCL 338.981(1)(f), for the Mechanical Board to proceed under Section 16 of the Mechanical Act, MCL 338.986, to impose sanctions.

COUNT IV

**FAILURE TO COMPLY WITH MANUFACTURER'S
INSTALLATION INSTRUCTIONS**

14. Respondent Garwood failed to install the baseboard component of a boiler heating system in conformance with the manufacturer's installation instructions.

15. Failure to install a boiler heating system in conformance with the manufacturer's installation instructions is a violation of Section M2101.1 of the Residential Code and constitutes grounds under Section 11(1)(f) of the Mechanical Act, MCL 338.981(1)(f), for the Mechanical Board to proceed under Section 16 of the Mechanical Act, MCL 338.986, to impose sanctions.

COUNT V

FAILURE TO PROVIDE ADEQUATE COMBUSTION AIR

16. Respondent Garwood failed to properly support the hydronic piping of the boiler heating system.

17. Failure to properly support the hydronic piping of the boiler heating system is a violation of Section M2101.9 of the Residential Code and constitutes grounds under Section 11(1)(f) of the Mechanical Act, MCL 338.981(1)(f), for the Mechanical Board to proceed under Section 16 of the Mechanical Act, MCL 338.986, to impose sanctions.

COUNT VI

FAILED TO INSTALL LOW WATER CUTOFF CONTROL

18. Respondent Garwood failed to install a low-water cutoff control that would automatically stop the combustion operation of the boiler when the water level drops below the lowest safe water level as established by the manufacturer in order to protect the boiler.

DAVID B. GARWOOD
STATEMENT OF INTENT

19. Failure to install a low-water cutoff control to protect the boiler is a violation of Section 1007.1 of the Mechanical Code and constitutes grounds under Section 11(1)(f) of the Mechanical Act, MCL 338.981(1)(f), for the Mechanical Board to proceed under Section 16 of the Mechanical Act, MCL 338.986, to impose sanctions.

COUNT VII

FAILED TO PROPERLY INSTALL EXPANSION TANK

20. Respondent Garwood failed to properly install a required expansion tank.

21. Failure to properly install a required expansion tank is a violation of Section 1009.1 of the Mechanical Code and constitutes grounds under Section 11(1)(f) of the Mechanical Act, MCL 338.981(1)(f), for the Mechanical Board to proceed under Section 16 of the Mechanical Act, MCL 338.986, to impose sanctions.

COUNT VIII

**FAILURE TO CORRECT VIOLATIONS AND GAIN
INSPECTION APPROVALS**

22. Respondent Garwood failed to correct code violations and obtain the approval of the enforcing agency for portions of the installations, alterations, or servicing of mechanical systems described in paragraphs 4 and 6.

23. Failure to correct any portions of an installation, alteration, or servicing of a mechanical system that do not comply with any provision of the Residential Code is a violation of Section R109.4 of the Residential Code and constitutes grounds under Sections 11(1)(f) of the Mechanical Act, MCL 338.981(1)(f), for the Mechanical Board to proceed under Section 16 of the Mechanical Act, MCL 338.986, to impose sanctions.

COUNT IX

GROSS NEGLIGENCE

24. Paragraph 18 above is incorporated herein by reference and repeated as if fully set forth.

25. Respondent Garwood has exhibited conduct so reckless as to demonstrate a substantial lack of concern for whether an injury results from the unsafe conditions he created in connection with his installation of a new boiler heating system in the home of Andrea Crawford; specifically: Respondent Garwood failed to install a low-water cutoff control that would automatically stop the combustion operation of the boiler when the water level drops below the lowest safe water level as established by the manufacturer to protect against boiler explosion.

26. Failure to install a low-water cutoff control that would automatically stop the combustion operation of the boiler when the water level drops below the lowest safe water level as established by the manufacturer in order to protect against boiler explosion is an act of gross negligence and constitutes grounds under Sections 11(1)(c) of the Mechanical Contractors Act, MCL 338.981(1)(c), for the Mechanical Board to proceed under Section 16 of the Mechanical Contractors Act, MCL 338.986, to impose sanctions.

COUNT X

INCOMPETENCE

27. The permit, code and inspection violations described in paragraphs 8, 10, 12, 14, 16, 18, 20, 22 and 25 above are incorporated herein by reference and repeated as if fully set forth.

DAVID B. GARWOOD
STATEMENT OF INTENT

28. Respondent Garwood has failed to perform adequately as a licensed mechanical contractor, or has demonstrated through his actions, a lack of character, experience or fitness that renders him unable to perform adequately as a mechanical contractor; specifically:

- a. Respondent Garwood has failed or is unable to comply with the minimum permit, inspection and technical installation requirements of the codes that regulate the installation of residential boiler heating systems; and
- b. Respondent Garwood has repeatedly used profanity with customers; and
- c. Respondent Garwood has failed to cooperate with a Livingston County Sheriff Deputy during an attempt to serve court papers related to Respondent's mechanical contractor activities by defiantly refusing service and telling the deputy to "get the f__k out of here" and further "telling the deputy to shove the paper up his a_s and using liberal profanity;" and
- d. Respondent Garwood has failed to comply with a Judgment issued by the 72nd District Court in Marine City on January 31, 2006, ordering Respondent to pay damages (restitution) of \$2,000 related to Ellen Ray's \$3,000 down payment related to the work described in paragraph 7 above.

29. Failure or inability to perform adequately is activity that falls within the legal definition of the term "incompetent," is an act that demonstrates incompetence and constitutes grounds under Sections 11(1)(e) of the Mechanical Contractors Act, MCL 338.981(1)(e), for the Mechanical Board to proceed under Section 16 of the Mechanical Contractors Act, MCL 338.986, to impose sanctions.

COUNT XI

**UNCONSCIONABLE ACT - CHARGING A GROSSLY
EXCESSIVE PRICE**

30. On or about November 18, 2005, Respondent Garwood submitted to Ellen Ray an invoice in the amount of \$3,210 for his partially completed installation of a boiler heating system.

31. A State of Michigan district court subsequently determined that the actual value of the work performed and materials furnished by Respondent Garwood at the Ray residence was only \$1,000.

32. Charging a consumer a price for plumbing work performed and plumbing materials furnished that is grossly in excess of the price at which similar property or services are sold is a violation of Section 3(1)(z) of the Michigan Consumer Protection Act, MCL 445.903(1)(z), which prohibits unfair, unconscionable, or deceptive methods, acts, or practices in the conduct of trade or commerce, is an act that demonstrates the practice of fraud or deceit in the performance of work for which a license is required under the Mechanical Contractors Act and constitutes grounds under Section 11(1)(b) of the Mechanical Contractors Act, MCL 338.981(1)(b), for the Mechanical Board to proceed under Section 16 of the Mechanical Contractors Act, MCL 338.986, to impose sanctions.

COUNT XII

NO LONGER QUALIFIED TO HOLD BOILER INSTALLER LICENSE

33. Paragraphs 8, 10, 12, 14, 16, 18, 20, 22, 25, 28, 30 and 31 above are incorporated herein by reference and repeated as if fully set forth.

DAVID B. GARWOOD
STATEMENT OF INTENT

34. Failure or inability of a licensed boiler installer (a) to properly install a residential boiler heating system, (b) to properly correct code violations in accordance with the minimum safety requirements of the Residential Code, (c) to cooperate with law enforcement officials, (d) to comply with the terms of a Judgment from a State of Michigan district court that has ordered restitution to a customer of a mechanical contractor, or (e) to refrain from unfair, unconscionable or deceptive methods, acts or practices in the conduct of the residential mechanical contracting trade is a valid reason for the Board of Boiler Rules to believe that a licensee is no longer qualified to hold a license for the installation or repair of larger and more complicated commercial boiler heating systems regulated under the Boiler Act and constitutes grounds under Sections 14(2) of the Boiler Act, MCL 408.764(2), for the Board of Boiler Rules hold a hearing and make a recommendation to revoke such license.

THE CONDUCT alleged in Counts I through XII may constitute grounds either for the imposition of licensing penalties and remedies provided in the Mechanical Act and the Boiler Act, including suspension, denial, or revocation of your mechanical contractors license, and restitution pursuant to the Mechanical Act and suspension, denial, or revocation of your boiler installer license pursuant to the Boiler Act, or the pursuit of misdemeanor and civil fine penalties provided in the State Construction Code Act or.

BE ADVISED that the Bureau must provide you with an opportunity to show compliance with all lawful requirements before commencing formal proceedings that might lead to penalties provided in the Mechanical Act and the State Construction Code Act. This is your Notice of the right to that opportunity.

BE FURTHER ADVISED that you may show compliance in writing. Alternatively, you may appear at an informal conference with the Bureau's representative scheduled for **Thursday**,

DAVID B. GARWOOD
STATEMENT OF INTENT

January 25, 2007, at 1:30 p.m., at the Bureau's offices at 2501 Woodlake Circle, Okemos, Michigan 48864.

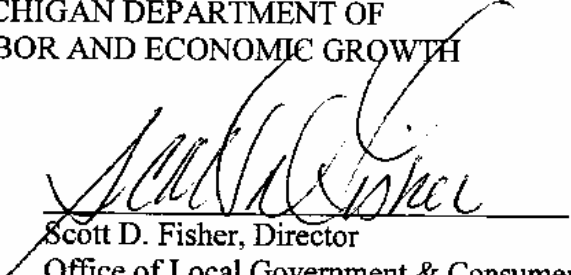
BE FURTHER ADVISED that it is important you understand that any statements which you present either in a written response or at any informal conference may be used against you at a formal hearing if one is held. It is also important that you understand you have the right, at your own expense, to have an attorney assist you in preparing a written response or assist you at an informal conference.

BE FURTHER ADVISED that if the Bureau's representatives decide you have not made a sufficient showing of compliance or if you do not respond to this Statement of Intent, the Bureau's representatives will institute formal administrative proceedings regarding the charges set forth in this Statement of Intent.

ANY COMMUNICATION regarding this Statement of Intent should be addressed to the Bureau of Construction Codes, Office of Local Government and Consumer Services, Attention: Gerrit Bakker, Department Analyst, P.O. Box 30254, Lansing, Michigan 48909.

MICHIGAN DEPARTMENT OF
LABOR AND ECONOMIC GROWTH

By:


Scott D. Fisher, Director
Office of Local Government & Consumer Services
Bureau of Construction Codes
P.O. Box 30254
Lansing, Michigan 48909

Dated: 1-25-07
Lansing, Michigan

DAVID B. GARWOOD
STATEMENT OF INTENT

A Copy of this Statement of Intent was sent by Certified and First Class Mail to:

David B. Garwood, d/b/a
Garwood Cooling & Heating
6820 Sober Road
Fowlerville, Michigan 48836

A Copy of this Statement of Intent was sent by First Class Mail to:

Timothy Colley, Mechanical Inspector
Livingston County Building Department
23000 E. Grand River Ave.
Howell, Michigan 48843

Andrea Crawford
9650 W. Pierson Road
Fowlerville, Michigan 48836

Ernest LaDoulx
P.O. Box 866
Ludington, Michigan 49431

Ellen Ray
221 Fraiser Blvd.
Harsens Island, Michigan 48028

Trooper Steve Sura
Michigan State Police Post # 12
44803 Old US-23
Brighton, Michigan 48114

Deputy P. Eggleston
Livingston County Sheriff Dept.
150 S. Highlander Way
Howell, Michigan 48843

A Copy of this Statement of Intent was sent by Interdepartmental Mail to:

Robert Aben, Chief
Boiler Division
Bureau of Construction Codes
P.O. Box 30222
Lansing, Michigan 48909

DAVID B. GARWOOD
STATEMENT OF INTENT

Tennison Barry, Chief
Mechanical Division
Bureau of Construction Codes
P.O. Box 30254
Lansing, Michigan 48909

Scott D. Fisher, Director
Office of Local Government and Consumer Services
Bureau of Construction Codes
P.O. Box 30254
Lansing, Michigan 48909

**STATE OF MICHIGAN
DEPARTMENT OF LABOR & ECONOMIC GROWTH
BUREAU OF CONSTRUCTION CODES**

In the Matter of:

David B. Garwood, d/b/a
Garwood Cooling & Heating
6820 Sober Road
Fowlerville, Michigan 48836

Agency Complaint Nos. 05-0694-M
and 06-0115-M

Mechanical Contractor License No. 71-06960
Boiler Installer License No. 31-3590

(Respondent)

_____ /

Entered into
this 27th day of February, 2007
by the Bureau and the Respondent

SETTLEMENT AGREEMENT

The Michigan Department of Labor and Economic Growth (hereafter the Department), Bureau of Construction Codes (hereafter the Bureau), having described its concerns for the public's safety and welfare in its Statement of Intent to Commence Proceedings and Notice of Opportunity to Show Why Such Proceedings Should Not Be Commenced Pursuant to the Forbes Mechanical Contractors Act, issued January 8, 2007 (hereafter the Statement of Intent), a copy of which is attached hereto and incorporated herein as an integral part of this Settlement Agreement, hereby agrees to resolve those concerns as follows:

WHEREAS, Respondent has attended an informal compliance conference on February 7, 2007, during which he explained the steps that he has taken to resolve the concerns of the Bureau but did not make a sufficient showing of compliance to the Bureau in connection with the violations alleged in the Statement of Intent; and

DAVID B. GARWOOD
SETTLEMENT AGREEMENT

WHEREAS, Respondent admits that the factual allegations contained in the Statement of Intent are true and correct; and

WHEREAS, Respondent admits that such facts would constitute violations of the acts, rules and codes cited in the Statement of Intent; and

WHEREAS, the Bureau's Mechanical Division and Respondent are desirous of settling this matter as hereafter set forth and agree to the entry of this Settlement Agreement; and

WHEREAS, Respondent waives his right to a hearing in this matter; and

WHEREAS, the Bureau finds this action necessary and appropriate in the public interest, for the protection of the public's health and general welfare, and consistent with the purposes and provisions of the acts, rules and codes cited in the Statement of Intent.

IT IS THEREFORE STIPULATED AND AGREED that:

1. Respondent shall pay RESTITUTION to Ernest LaDoulx in the amount of \$4,790; and
2. Respondent shall pay RESTITUTION to Ellen Ray in the amount of \$2,000; and
3. Respondent shall issue LETTERS OF APOLOGY to a) consumer Ernest LaDoulx and his daughter, Andrea Crawford, b) consumer Ellen Ray, c) Livingston County Sheriff Deputy P. Eggleston, with copies to the Board of Mechanical Rules and the Board of Boiler Rules; and
4. Respondent shall pay a combined CIVIL PENALTY to these boards, via the Bureau, in the amount of \$5,000; however the entire civil penalty will be WAIVED if and only if Respondent completes his consumer restitution and letters of apology within 120 days of this agreement and if he provides proof of same to the Bureau;
5. The Mechanical Division and the Boiler Division will allow Respondent to RETAIN his mechanical contractor license and his boiler installer license.

DAVID B. GARWOOD
SETTLEMENT AGREEMENT

IT IS FINALLY STIPULATED AND AGREED that failure to satisfy the conditions set forth above within the agreed upon 120 days will result in the summary SUSPENSION of Respondent Garwood's mechanical contractor license by the Board of Mechanical Rules and his boiler installer license by the Board of Boiler Rules without further hearings.

The parties have entered into this Settlement Agreement on the dates indicated below. It is further understood that this Settlement Agreement is a public document and is available to members of the public upon request.

ANY COMMUNICATION regarding this Statement of Intent should be addressed to the Bureau of Construction Codes, Office of Local Government and Consumer Services, Attention: Gerrit Bakker, Department Analyst, P.O. Box 30254, Lansing, Michigan 48909.

MICHIGAN DEPARTMENT OF
LABOR AND ECONOMIC GROWTH

By: Tennison Barry
Tennison Barry, Chief
Mechanical Division
Bureau of Construction Codes
(517) 241-9330

Dated: 2-7-07
Okemos, Michigan

By: Robert Aben
Robert Aben, Chief
Boiler Division
Bureau of Construction Codes
(517) 241-9334

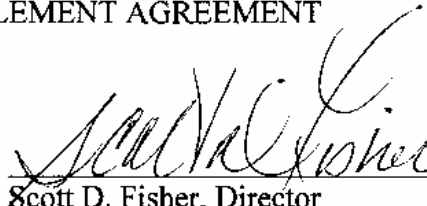
Dated: 2-7-07
Okemos, Michigan

By: David B. Garwood
David B. Garwood, Respondent

Dated: FEB 7 07
Okemos, Michigan

DAVID B. GARWOOD
SETTLEMENT AGREEMENT

By:


Scott D. Fisher, Director
Office of Local Government & Consumer Services
Bureau of Construction Codes
P.O. Box 30254
Lansing, Michigan 48909

Dated: 02-07-07
Okemos, Michigan

A Copy of this Settlement Agreement was sent by First Class Mail to:

David B. Garwood, d/b/a
Garwood Cooling & Heating
6820 Sober Road
Fowlerville, Michigan 48836

Building Official
Livingston County

Building Official
Clay Township, St. Clair County

A Copy of this Settlement Agreement was sent by First Class Mail to:

Mechanical Division
Bureau of Construction Codes
P.O. Box 30254
Lansing, Michigan 48909

Boiler Division
Bureau of Construction Codes
P.O. Box 30222
Lansing, Michigan 48909



JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LABOR & ECONOMIC GROWTH
LANSING

KEITH W. COOLEY
DIRECTOR

August 21, 2007

(Document BLR2007-16)

To: Members, Board of Boiler Rules
From: *RJA*
Robert J. Aben Jr.
Subject: Michigan Dept. of Corrections, Huron Valley Complex request for 24 Month
Inspection Cycle for Boilers R322328, R322329 and R322330

Dear Members;

The Division has received and reviewed the draft procedure for the 24-month inspection frequency of subject boilers. Our review determined that the procedure incorporates the necessary criteria established by the Board for 24-month inspections.

Based on documentation submitted by Mr. Robert Anderson, Physical Plant Supervisor for Huron Valley Complex and on file with the division I am recommending board approval of the request.

Providing for Michigan's Safety in the Built Environment

Bureau of Construction Codes/Boiler Division
P.O. BOX 30254 • LANSING, MICHIGAN 48909
www.michigan.gov • (517) 241-9334

Michigan Department of Corrections

Expecting Excellence Every Day

William Vallance
Assistant Chief- Boiler Division
6546 Mercantile Way
Suite 3
Box 30254
Lansing, Michigan, 48909

July 31, 2007

Dear William;

I have enclosed the documents for application to the boiler board to receive approval of 24 month internal boiler inspection for your review. The responsible party to oversee that the program functions properly is the Huron Valley Complex Business Manager. Currently the incumbent is Dean Batkins, State Administrative Manager. Please let me know of any additional information you need.

Thank you for all your assistance.

Respectfully,



Robert Anderson
Physical Plant Supervisor
Huron Valley Complex
3511/3201 Bemis Road
Ypsilanti, Michigan, 48197
734.572.9592
andersrh@michigan.gov

RECEIVED

AUG 16 2007

Boiler Division

**Huron Valley Complex
Plant Order
24 Month Internal Certificate Program**

6.0 Attachments/Exhibits

- I. Boiler Certificate Numbers
- II. PPO 10 Position Description
- III. Heating Plant Orientation Testing
- IV. Boiler Lockout Tagout
- V. Blowdown
- VI. Boiler Water Tx Log Daily by Month
- VII. Boiler Chemistry
- VIII. Boiler Maintenance Plan
- IX. Daily Log Sheet

Huron Valley Complex Plant Order 24 Month Internal Certificate Program

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4.7 Maintenance Plan

4.8 Review Committee

4.9 NFPA

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5.2.4 Reporting

5.3 Review / Updating of Heating Plant Orders

6.0 Attachments

Huron Valley Complex Plant Order 24 Month Internal Certificate Program

1.0 Purpose

The purpose of this procedure is to establish the requirements to be met to allow HVC to extend the internal inspection of heating plant boilers to 24 months.

2.0 Scope

This procedure shall apply to two natural gas fired boilers (see attachment 1-Boiler Certificate Numbers) used for steam generation at the HVC site. Attachments provided are typical and representative of heating plant boilers.

3.0 References

1.0 Michigan Boiler Law and Rules-Public Act of 1965, Act 290 of 1965.

4.0 Abbreviations and Definitions

4.1 A.S.M.E.

American Society of Mechanical Engineers

4.2 State Inspector

Means an individual who is licensed as an Inspector by the State of Michigan, Boiler Division, Who holds a valid certificate of competency and National Board Commission.

4.3 Design Envelope

The operating parameters, temperature, pressure, and steam flow that the unit was designed to.

4.4 HVC

Huron Valley Complex

Huron Valley Complex Plant Order 24 Month Internal Certificate Program

4.5 External Boiler Inspection

An inspection which is conducted while the boiler is under pressure and does not involve examination of the internal surfaces of the pressure parts of the boiler.

4.6 Internal Boiler Inspection

An inspection made when the boiler is shutdown and hand holes or manholes are opened for inspection of the interior.

4.7 Maintenance Plan

The maintenance plan established and agreed upon by the physical plant supervisor, business manager, boiler inspector, water treatment representative, and boiler service firm. The boiler maintenance shall be performed as required both in time intervals and types of service, testing, and inspection as appropriate to the boiler type. This shall not preclude service, inspection, and testing above and beyond the basic requirements by codes, rules, and regulation. Boiler maintenance will also conform to the requirements of NFPA 85 and the National Board of Inspection Code.

4.8 Review Committee

The review committee will consist of appropriate personnel and the authorized inspector. See Section 5.2 of this order.

4.9 NFPA

National Fire Protection Association

5.0 Procedure

5.1 Criteria to be Met By Plant Personnel

The following criteria shall be used by the review committee when establishing the time between boiler internal inspections. The intent of this Plant Order is to establish a 24 month schedule of internal inspections upon the approval of the Board of Boiler Rules.

5.1.1 Operator Training

Huron Valley Complex Plant Order 24 Month Internal Certificate Program

There shall be a formal operator training program in place and functional which assures the plant is operated within its design envelope. Please refer to attachments PPO (Power Plant Operator) 10 Position Description, Heating Plant Orientation Testing, and Blowdown. Training shall be ongoing with 8 hour minimum inservice training per year. New equipment and devices shall require operator inservice for operation.

5.1.2 Boiler Maintenance

It shall be evident that HVC is adhering to its boiler maintenance plan.

Copies will be kept on site of boiler service, testing, inspection, and repair by qualified service companies. A daily log sheet will record daily readings, and a plant logbook will record daily activities.

5.1.3 Water Chemistry

Each unit shall have an established water chemistry procedure that follows the manufacturer's recommendations on appropriate operation. Please refer to attachments-Boiler Water Tx Log Daily By Month and Boiler Chemistry and procedure task sheet.

1. Water chemistry guidelines are established and documentation is available to show compliance.
2. Operators are knowledgeable of the water chemistry guidelines and familiar with corrective actions required for non-conformance incidents.
3. A system for routine monitoring of the water chemistry condition, which includes physical sample analyzation.
3. A qualified person is in charge of water chemistry.

5.1.4 Operating Parameters

Documentation of the unit being operated within the design envelope shall be available.

The Huron Valley Complex is a 24/7 operation. The boiler operating steam pressure is 125 psi. One boiler typically handles the load with 1 boiler kept in hot standby.

Huron Valley Complex Plant Order 24 Month Internal Certificate Program

5.1.5 Chemical Cleaning Schedule

Chemical cleaning of the boiler will be undertaken with the acceptance of the Inspector. Any chemical cleaning subsequently performed shall only be performed by a firm licensed and qualified for boiler chemical cleaning.

5.1.6 Protective Devices

1. Will be maintained within the requirements of NFPA 85
2. Safety Valves shall be tested and maintained on a periodic basis. The maximum duration between testing is 6 months. State of Michigan Boiler Rules-Rule # R408.4566 and NBIC RB8410 A shall be adhered to.
3. Safety Valves will be tested and repaired by a company who possesses and maintains the proper National Board and A.S.M.E. certifications.
4. Unit trip devices shall be installed and operational with a periodic inspection and testing program in place and functional. The testing shall meet the manufacturers requirements of each device tested. The testing will be documented for the review committee's evaluation.

5.1.7 Boiler External Inspection

The Designated Inspector shall perform a physical inspection of the boiler exterior while the boiler is under pressure.

5.1.8 Boiler Internal Inspection

An Inspector will perform an internal inspection during the biennial internal boiler inspection in the presence of HVC plant personnel.

5.1.9 Special Hydrostatic Test

Huron Valley Complex Plant Order 24 Month Internal Certificate Program

HVC recognizes boiler rule R408.4507 (e) allows to owner to request a waiver of the special hydrostatic test under this rule to the Chief Inspector if the boiler stated in the request has been granted an extension of the internal inspection frequency under rule R408.4058. If a waiver is granted, the Review Committee established under rule R408.4058 shall evaluate the condition of the boiler during each review to determine if a hydrostatic test is necessary.

5.2 Review Committee

5.2.1 Membership

The Review Committee shall consist of appropriate HVC personnel and the Authorized Inspector (Insurance Company representative). For this application, HVC will use Physical Plant Staff to participant and serve as part of the Review Committee.

5.2.2 Responsibilities of Members

The Review Committee will determine the acceptability of a boiler to operate safely for a 24 month period. If all members do not agree to the increase in the inspection cycle time, it shall not be increased. The Review Committee may decrease the period of time the boilers may operate, but shall not extend the period beyond 24 months. The grace period provided under boiler rule R408.4057 does not apply.

5.2.3 Meetings

a. Primary Meeting

Shall be held within 30 days after the internal inspection. The review committee and Inspector will determine the next internal inspection interval.

b. A Secondary Meeting

- i. May be initiated if conditions change that would affect the agreed upon inspection interval.

Huron Valley Complex Plant Order 24 Month Internal Certificate Program

- ii. Items which may affect the decision of the Review Committee to shorten the inspection interval may include (but are not limited to) the following:
 - ∞Over-temperature excursions of a severe nature.
 - ∞Boiler headers with a history of cracking and / or leaks
 - ∞Water chemistry upsets or severe leaks which may have caused damage to internal deposits to the water tubes
 - ∞Changes in the operating mode going from a base load unit to a cyclic operation
 - ∞Severe boiler puffs causing structural damage to the unit
 - ∞Dissimilar metal weld failures or numerous weld failures
 - ∞Large sections of tubing thinned to the point of failure due to fire side corrosion
 - ∞Fatigue cracks in headers which results in leaks, headers with severe creep damage and broken header support systems.
- iii. Items felt to be of a routine nature will not affect the inspection interval are:
 - ∞Slip spacer cracks

5.2.4 Reporting

A summary sheet of a primary or secondary meeting showing the Review Committee attendees and their findings will be forwarded to the boiler division after the Review Committee has met. The sheet will be signed by the Inspector and a HVC Representative, and forwarded to boiler division.

5.3 Review / Update of This Heating Plant Order

Revisions to this procedure shall be initiated by a responsible person in HVC Physical Plant and shall be subject to the approval of the Inspector. Revisions will be supplied to Boiler Division.

Boiler Certificate Numbers

Boiler 1

State NO: M322328M

Model D052

Unit # WL-2347

Boiler 2

State NO: M322329M

Model D052

Unit # WL-2346

Boiler 3

State Number M322330M

Model D052

Unit # WL-2345

Boiler: R322328 Address: 3201 BEMIS RD-YPSILANTI 81
 Status: ACTIVE OWNER: HURON VALLEY MENS FAC
 Date: 01/01/1976 Back Stop

First Inspection Information

First Inspection Date: / / Date Installed: 01/01/1976
 Boiler Use: POWER Power Boiler
 Other #: 34665 Code: 1 (1=NB, 2=MFG)
 Pressure Allowed: 260 S V Pressure: 150
 Insurer Number: 8082 HARTFORD STEAM BOILER
 Inspector Number: 300840 LAWRENCE BLACK NB Commission Number 0
 Owner Name: HURON VALLEY MENS FAC
 Business Nature: CORRECTIONS
 Specific Location: LOC 207 County: 81 WASHTENAW
 Construction Type: 1 (1=Wld, 2=Rvt, 3=Lap, 4=Mech) Boiler Type: 2 (1=FT, 2=WT, 3=CI, 4=Other)
 Manufacturer: CLEAVER BROOKS Year Built: 1975
 Fuel Type: OIL Method of Firing: AUTO Pressure Gage(Y/N): Y
 Low Water Cutoff: FLOAT With Manhole(Y/N): Y
 Power Boiler Surface: 2,668 Heat Surface: 1 (1=Stamped, 2=Computed)
 MRSVC Based On: 1 (1=Stamp, 2=BTU, 3=Grate Area) LBS/BTU: L Total LBS/BTU: B
 Max Design Steaming Cap: 28,120 MRSVC: 28,120 Total Cap SVC: 36,517
 Permit #: Permit Type:
 Contact Person: Phone:
 Contractor License#: Class:

Boiler: R322328 Address: 3201 BEMIS RD-YPSILANTI 81
 Status: ACTIVE OWNER: HURON VALLEY MENS FAC
 Date: 01/01/1976 Back Stop

Inspection Information

Current Inspection Information (Invoice/Certificate O=Own, L=Loc)
 Date: 03/07/2007 Mail Code: 3 (1=O/L, 2=L/O, 3=O/O, 4=L/L)
 Batch #: REINSP Boiler IAB: I (I or Blank) Class: IAB Boiler Status: ACTIVE
 Multiple: N Issue Invoice: Y Inspection Cycle: 1 Bill Ins:
 Rule 27 - Test Procedure(Y/N/NA): N Int/Ext: 1 (1=Internal, 2=External)
 LBS/BTU: L (L=LBS, B=BTU) Rule 507 Inspection: 01/30/2006
 Next Rule 507 Due: 2014
 Total Cap SVC: 40,170 S V Pressure: 150
 Inspector #: 300432 JOHN MAZIARZ Pressure Allowed: 260
 NB Commission Number: 12486 Max Design Steaming Cap: 28,120
 Insurance Co #: 8082 HARTFORD STEAM BOILER MRSVC: 28,120
 Invoice#: BLR0610582 BTU/HR Input: 0

Inspection Information

Date	Rule 27	MC	IAB	I/E	L/B	Total Cap SVC	Insp #	Ins Co #	Invoice #	Batch #
02/08/2006	NA	3	I	1	L	40,170	300432	8082	BLR0577984	REINSP
11/09/2004	NA	3	I	2	L	40,170	300840	8082	BLR0553655	R04364
01/07/2004	NA	3	I	3	B	40,170	300432	8082	BLR0526733	R4054C
11/06/2002	NA	3	I	1	B	36,457	300432	8082	BLR0488505	2352HB
08/27/2001	Y	3	I	1	B	36,517	300840	8082	BLR0445549	1257HA

RULE 507 HYDROSTATIC INSPECTION REPORT

Date: 1/30/06

State Number: 1322328M

Location Name HURON VALLEY MEN'S CORR. FAC.

Street Address 3201 BEMIS RD

City/State/Zip YPSILANTI, MI 48197

☒ Type
☐ Welded
☐ Riveted
☐ Lap Seam
☐ Cast Iron

☒ Pressure
☐ High Pressure
☐ Low Pressure

1. ☒ Yes ☐ No Hydro test between 80% and 1 1/2 times MAWP

260 Design Pressure 220 Test Pressure

2. ☒ Yes ☐ No Internal inspection made - Conditions noted - FIREBOX

None adverse

3. ☒ Yes ☐ No Longitudinal and girth seams exposed - Conditions noted (Riveted boiler only)

4. ☒ Yes ☐ No Supports and attachments exposed - Conditions noted none adverse

5. ☒ Yes ☐ No Leak test not exceeding set pressure of safety/relief valve (Cast iron boilers only)

6. Comments: NOP - 125#

Joe M. Magy
Inspector Signature

300432
Inspector #

HSB/8082
Company Name & Company #

This form to be used only when 507 is complied as separate inspection from the certificate inspection.

Boiler:: R322329 Address: 3201 BEMIS RD-YPSILANTI 81
Status: ACTIVE OWNER: STATE OF MICHIGAN
Date: 01/01/1976 Back Stop ☐

First Inspection Information

First Inspection Date: / / Date Installed: 01/01/1976
Boiler Use: POWER Power Boiler
Other #: 34666 Code: 1 (1=NB, 2=MFG)
Pressure Allowed: 260 S V Pressure: 150
Insurer Number: 8082 HARTFORD STEAM BOILER
Inspector Number: 300840 LAWRENCE BLACK NB Commission Number 0
Owner Name: STATE OF MICHIGAN
Business Nature: CORRECTIONS
Specific Location: LOC#207 PWR PLT County: 81 WASHTENAW
Construction Type: 1 (1=Wld, 2=Rvt, 3=Lap, 4=Mech) Boiler Type: 2 (1=FT, 2=WT, 3=CI, 4=Other)
Manufacturer: CLEAVER BROOKS Year Built: 1975
Fuel Type: NAT GAS Method of Firing: AUTO Pressure Gage(Y/N): Y
Low Water Cutoff: FLOAT With Manhole(Y/N): Y
Power Boiler Surface: 2,668 Heat Surface: 1 (1=Stamped, 2=Computed)
MRSVC Based On: 1 (1=Stamp, 2=BTU, 3=Grate Area) LBS/BTU: L Total LBS/BTU: L
Max Design Steaming Cap: 28,120 MRSVC: 28,120 Total Cap SVC: 36,512
Permit #: Permit Type:
Contact Person: Phone:
Contractor License#: Class:

Boiler: R322329 Address: 3201 BEMIS RD-YPSILANTI 81
Status: ACTIVE OWNER: STATE OF MICHIGAN
Date: 01/01/1976

Back Stop

Inspection Information

Current Inspection Information (Invoice/Notification O=Own, L=Loc)

Date: 03/15/2007 Mail Code: 3 (1=O/L, 2=L/O, 3=O/O, 4=L/L)
Batch #: REINSP Boiler IAB: I (I or Blank) Class: IAB Boiler Status: ACTIVE
Multiple: N Issue Invoice: Y Inspection Cycle: 1 Bill Ins:
Rule 27 - Test Procedure(Y/N/NA): N Int/Ext: 1 (1=Internal, 2=External)
LBS/BTU: L (L=LBS, B=BTU) Next Inspection Due: 03/14/2008
Total Cap SVC: 40,170 Rule 507 Inspection: 03/03/2006
Inspector #: 300432 JOHN MAZIARZ Next Rule 507 Due: 2014
NB Commission Number: 12486 S V Pressure: 150
Insurance Co #: 8082 HARTFORD STEAM BOILER Pressure Allowed: 260
Invoice#: BLR0611127 Max Design Steaming Cap: 28,120
MRSVC: 28,120
BTU/HR Input: 0

Inspection Information

Date	Rule 27	MC	IAB	I/E	L/B	Total Cap SVC	Insp #	Ins Co #	Invoice #	Batch #
03/07/2006	NA	3	I	1	L	40,170	300432	8082	BLR0579334	REINSP
11/09/2004	NA	3	I	2	L	40,170	300432	8082	BLR0553656	R04364
01/21/2004	NA	3	I	3	L	36,513	300432	8082	BLR0529762	R4076A
12/11/2002	NA	1	I	1	L	36,603	300432	8082	BLR0490581	3013HG
06/29/2001	Y	1	I	1	L	36,513	300840	8082	BLR0439924	1205HB

BOILER PERMIT APPLICATION
Michigan Department of Consumer & Industry Services
Boiler Division
PO Box 30255
Lansing, MI
(517) 241-9334

48909 8/24/01
59433

FEE: \$50.00

AUTHORITY: 1965 PA 290	THE DEPARTMENT OF CONSUMER AND INDUSTRY SERVICES WILL NOT DISCRIMINATE AGAINST ANY INDIVIDUAL OR GROUP BECAUSE OF RACE, SEX, RELIGION, AGE, NATIONAL ORIGIN, COLOR, MARITAL STATUS, HANDICAP, OR POLITICAL BELIEF.
COMPLETION: MANDATORY	
PENALTY: PERMIT WILL NOT BE ISSUED	

IMPORTANT: SUBMIT ORIGINAL AND 2 COPIES OF THIS APPLICATION. This application, when stamped and approved by the Boiler Division, shall serve as a permit to install, repair, field erect, or alter this boiler as described on the application. Enclose a check or money order payable to State of Michigan. Mail completed application and payment to address listed above.

LEGAL REQUIREMENT

Rule 33. A person shall not install, reinstall, alter, or repair a boiler or its piping without first securing a permit to install, reinstall, alter, or repair from the Bureau of Construction Codes, Boiler Division.

Rule 35. Permits shall be issued only to persons licensed as required by the ACT and these rules. Work shall be performed by or under the supervision of a licensed person.

Type of Permit <input type="checkbox"/> INSTALL <input checked="" type="checkbox"/> REPAIR <input type="checkbox"/> ALTER <input type="checkbox"/> FIELD ERECT <input type="checkbox"/> PIPING					
Licensed Installer/Repairer's Name <i>Karen Elsonik</i>				Application Date AUG 22 2001	
Company Name <i>Purvis + Foster, Inc.</i>				License Number <i>320343</i>	Expiration Date <i>12/31/01</i>
Address <i>6440 Wight St.</i>		City <i>Detroit</i>	State <i>MI</i>	ZIP Code <i>48207</i>	Telephone Number <i>(313) 259-3377</i>
Owner / User's Name <i>Huron Valley Mens Facility</i>					
Address <i>3201 Bemis Rd.</i>		City <i>Ypsilanti</i>	State <i>MI</i>	ZIP Code <i>48197</i>	County <i>Washtenaw</i>
Boiler Location Address (If different than owner/user)		City	State	ZIP Code	County
Use <input type="checkbox"/> Power <input type="checkbox"/> Process <input type="checkbox"/> Steam Heating <input type="checkbox"/> HWH <input checked="" type="checkbox"/> HWS <input type="checkbox"/> Other				Construction <input checked="" type="checkbox"/> Welded <input type="checkbox"/> Riveted <input type="checkbox"/> LAP	
Contact Person					Telephone Number
REPAIR (162)			INSTALLATION (161)		
MICHIGAN BOILER NUMBER M <i>322329</i> M		Date of Repair/Alteration <i>7/25/01</i>		Manufacturer	
Licensed Inspector <i>Allen Schofer 576</i>		National Board Member		Maximum Pressure	
Licensed Inspector's Employer <i>Hartford 8082</i>		Boiler Size In: LBS / STEAM HR _____ BTU / HR INPUT _____		ASME Standard <input type="checkbox"/> Yes <input type="checkbox"/> No	
Name of ASME Shop Who Approved Proposal Alteration		Type <input type="checkbox"/> Fire Tube <input type="checkbox"/> Cast Iron <input type="checkbox"/> Water Tube <input type="checkbox"/> Other _____		Previous Location of Used Boiler	
Address		Address		Address	
City	State	ZIP Code	City	State	ZIP Code
WPS		Hydro Test Pressure <i>125 lbs</i>		Date Ready For Inspection	
		MICHIGAN BOILER NUMBER M _____ M			

IMPORTANT: Describe repair and/or provide a sketch of repair on the back side of this application.

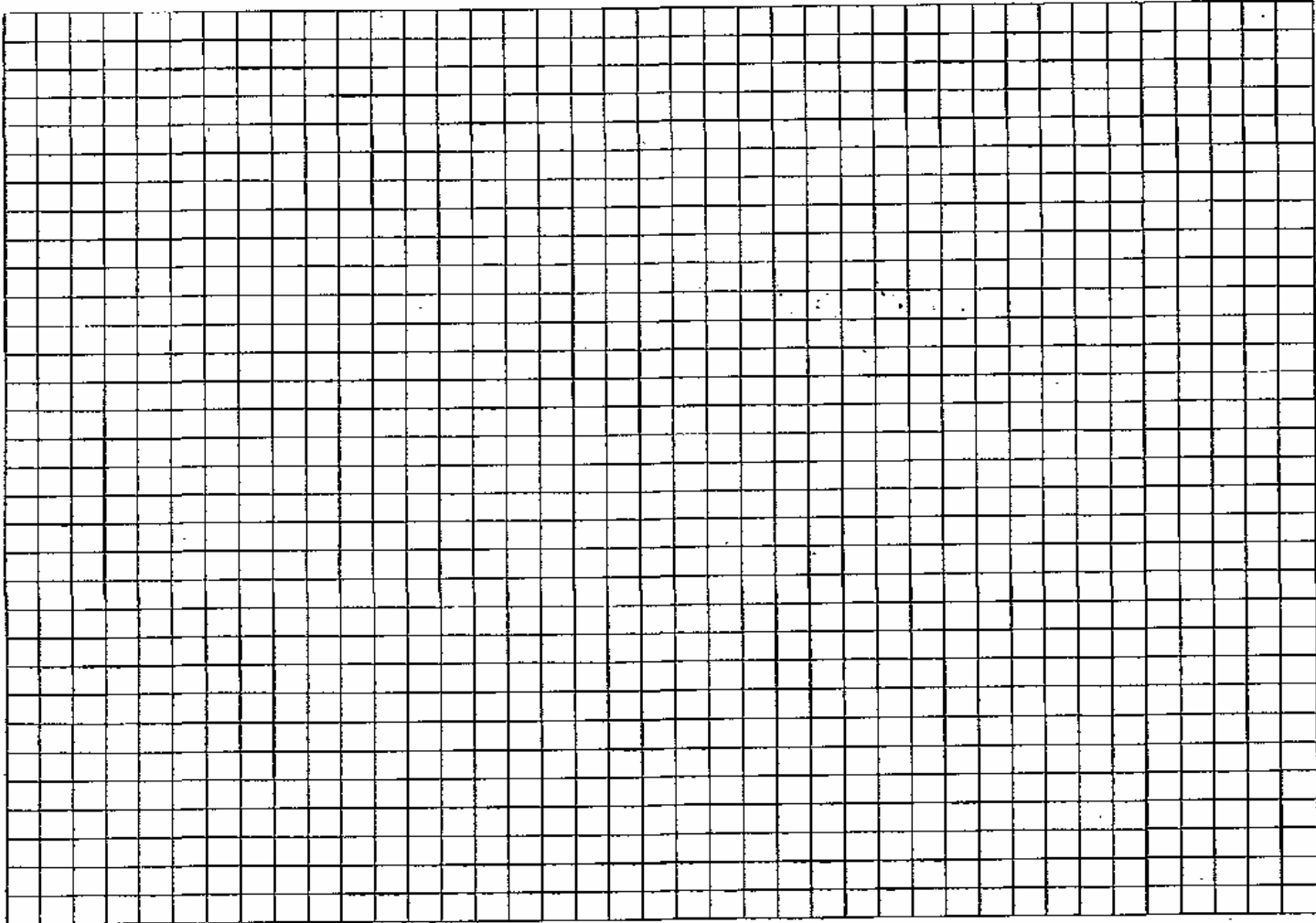
INSTALLATION: Provide a drawing showing clearance dimensions around boiler on the back of this application.

013975

Signature of Licensed Installer/Repairer <i>Karen Elsonik</i>	Date AUG 22 2001
--	----------------------------

Description of Repair (Provide sketch below if necessary)

Replaced 3- 5/8" studs in the steam drum



OFFICE USE ONLY

Transit 3601774-10 60/04/01

CHK: 59433 \$50.00

ID: PURVIS & FOSTER INC

MICHIGAN DEPARTMENT OF LABOR
BUREAU OF SAFETY AND REGULATION
5015 S. CEDAR
LANSING, MICHIGAN 48926

MICHIGAN BOILER RULES AND REGULATIONS
INSPECTION REPORT-ALL BOILERS

☒ FIRST INSPECTION
☐ RE-INSTALLATION
☐ REINSPECTION

☐ USED BOILER INSPECTION
☐ OTHER FEE INSPECTION
☐ HYDRO TEST

CODE:

PBC-2

TIME:

LANSING OFFICE

1	DATE INSPECTED: MO. DAY YEAR 11 02 76	OWNER OR BATTERY NO. 02	STATE NUMBER M 322329	OTHER NUMBER 34666	KIND OF INSPECTION <input checked="" type="checkbox"/> NB <input type="checkbox"/> MFG <input type="checkbox"/> INT <input checked="" type="checkbox"/> EXT	CERTIFICATE INSPECTION <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	RULE 307 INSPECTION DUE <input type="checkbox"/> YES <input type="checkbox"/> COMP.
NATURE OF BUSINESS Dept of Corrections					CORRECTIONS		
OWNERS CITY 131 MASON BLVD LANSING					STATE MICH		
SPECIFIC LOCATION Reception Guidance Ctr.					BOILER LOCATION Washburn		
BOILER LOCATION CITY 1630 BARRIS RD YPSILANTI					STATE MICH		
USE <input checked="" type="checkbox"/> POWER <input type="checkbox"/> PROCESS <input type="checkbox"/> STEAM HTG. <input type="checkbox"/> HWH <input type="checkbox"/> HWS <input type="checkbox"/> OTHER					CONSTRUCTION <input checked="" type="checkbox"/> WELDED <input type="checkbox"/> RIVETED <input type="checkbox"/> LAP <input type="checkbox"/> FT <input type="checkbox"/> WT <input type="checkbox"/> CI <input type="checkbox"/> OTHER		
MANUFACTURER Cleaver Brooks					YEAR BUILT 1975		
PRESSURE GAUGE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO					TESTED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		
LOW WATER CUT OFF TYPE: PROBE					HYDRO TEST <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		
PRESSURE ALLOWED THIS INSPECTION: 260					SAFETY - RELIEF VALVES SAFETY VALVE SET AT: 150 & 155		
POWER SOURCE 2428					MIN. S.V. REL. CAP REQUIRED: 28,120		
CERTIFICATE POSTED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO					IS CAPACITY ADEQUATE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		
MINIMUM REQUIRED SAFETY VALVE RELIEF CAPACITY 2428					TOTAL CAP. OF SAFETY VALVES 36,513		
IS CONDITION OF BOILER SUCH THAT A CERTIFICATE MAY BE ISSUED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO					OR BTLU/HR 36,513		

COMPLETE THE FOLLOWING FOR ALL FIRST INSPECTIONS AND RE-INSTALLATIONS									
INSTALLERS LIC. NO. 1527		PERMIT NO. 7601932-I		NEW <input checked="" type="checkbox"/> USED		PROPERLY STAMPED ASME <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		N.B. <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
CONSTRUCTION NO. 1		DIAM. OR WIDTH 36		LENGTH 208		MATERIAL STEEL		MANHOLE 4-11X16	
FEED APPLIANCES NO. 2		TYPE <input type="checkbox"/> STEAM <input checked="" type="checkbox"/> MOTOR <input type="checkbox"/> OTHER		NO. OF WATER GAUGES 1		NO. OF TEST COCKS 3		BLOWOFF DISCHARGES TO CODE TANK	
FEED CHECK VALVE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		FEED CHECK VALVE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		FEED CHECK VALVE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		FEED CHECK VALVE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		FEED CHECK VALVE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
FEED CHECK VALVE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		FEED CHECK VALVE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		FEED CHECK VALVE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		FEED CHECK VALVE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		FEED CHECK VALVE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
FEED CHECK VALVE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		FEED CHECK VALVE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		FEED CHECK VALVE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		FEED CHECK VALVE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		FEED CHECK VALVE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
FEED CHECK VALVE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		FEED CHECK VALVE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		FEED CHECK VALVE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		FEED CHECK VALVE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		FEED CHECK VALVE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
FEED CHECK VALVE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		FEED CHECK VALVE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		FEED CHECK VALVE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		FEED CHECK VALVE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		FEED CHECK VALVE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	

1. If no or other explain under conditions. 2. W=Welded, T=Threaded, O=Other. 3. Report ASA Piping under Conditions.
4. FBD=Free Blow Drain. 5. When reporting on non-code boilers use N.B. P-5 Report Form.

13 CONDITIONS OF BOILER:

1AB-1

Hydro test revealed no sign of leakage in any area that could be seen

14 REQUIREMENTS: OWNER/USER: YOU MUST COMPLY WITH THESE REQUIREMENTS:

No adverse conditions noted

15 NAME AND TITLE OF PERSON TO WHOM REQUIREMENTS WERE EXPLAINED:
Richard D. Adams

VIOLATIONS ISSUED

☐ YES
☒ NO

ORDER NO.

COMPLIANCE DATE

0377

I hereby certify this is a true report of my inspection

SIGNATURE OF INSPECTOR

LICENSE NO.

EMPLOYED BY:

BUREAU OF SAFETY AND REGULATION

IDENT NO:

0001

Boiler:: R322330 Address: 3201 BEMIS RD-YPSILANTI 81
Status: ACTIVE OWNER: HURON VALLEY MENS FACILITY
Date: 01/01/1976

Back Stop ☐

First Inspection Information

First Inspection Date: / / Date Installed: 01/01/1976

Boiler Use: STEAM Steam Heating Boiler

Other #: 34664 Code: 1 (1=NB, 2=MFG)

Pressure Allowed: 260 S V Pressure: 150

Insurer Number: 8082 HARTFORD STEAM BOILER

Inspector Number: 300840 LAWRENCE BLACK NB Commission Number 0

Owner Name: HURON VALLEY MENS FACILITY

Business Nature: CORRECTIONS

Specific Location: LOC 207 County: 81 WASHTENAW

Construction Type: 1 (1=Wld, 2=Rvt, 3=Lap, 4=Mech) Boiler Type: 2 (1=FT, 2=WT, 3=CI, 4=Other)

Manufacturer: CLEAVER BROOKS Year Built: 1975

Fuel Type: GAS Method of Firing: AUTO Pressure Gage(Y/N): Y

Low Water Cutoff: PROBE With Manhole(Y/N): Y

Power Boiler Surface: 2,668 Heat Surface: 1 (1=Stamped, 2=Computed)

MRSVC Based On: 1 (1=Stamp, 2=BTU, 3=Grate Area) LBS/BTU: L Total LBS/BTU: B

Max Design Steaming Cap: 28,120 MRSVC: 28,120 Total Cap SVC: 36,513

Permit #: Permit Type:

Contact Person: Phone:

Contractor License#: Class:

Boiler:: R322330

Address: 3201 BEMIS RD-YPSILANTI 81

Status: ACTIVE

OWNER: HURON VALLEY MENS FACILITY

Date: 01/01/1976

Back Stop ☐ Inspection Information

Current Inspection Information

(Invoice/Certificate O=Own, L=Loc)

Date: 04/13/2006

Mail Code: 3 (1=O/L, 2=L/O, 3=O/O, 4=L/L)

Batch #: REINSP

Boiler IAB: I (I or Blank)

Class: IAB

Boiler Status: ACTIVE

Multiple: N

Issue Invoice: Y

Inspection Cycle: 2

Bill Ins

Rule 27 - Test Procedure(Y/N/NA): N

Next Inspection Due: 04/12/2008

Int/Ext: 1 (1=Internal, 2=External)

Rule 507 Inspection: 04/05/2006

LBS/BTU: L (L=LBS, B=BTU)

Next Rule 507 Due: 2014

Total Cap SVC: 0

S V Pressure: 150

Inspector #: 300432

JOHN MAZIARZ

Pressure Allowed: 260

NB Commission Number: 0

Max Design Steaming Cap: 28,120

Insurance Co #: 8082

HARTFORD STEAM BOILER

MRSVC: 28,120

Invoice#: BLR0583176

BTU/HR Input: 0

Inspection Information

Date	Rule 27	MC	IAB	I/E	L/B	Total Cap SVC	Insp #	Ins Co #	Invoice #	Batch #
02/03/2004	NA	3	I	1	L	40,170	300840	8082	BLR0529743	R4076A
01/31/2003	NA	3	I	1	L	40,170	300432	8082	BLR0493847	R3044A
08/06/2001	Y	3	I	3	L	36,513	300840	8082	BLR0443301	1236HC
06/28/2000	Y	1	I	2	L	36,513	300752	8082	BLR0416554	0307HA
12/10/1999	Y	1	I	1	L	36,513	300752	8082	BLR0386804	9350HA



JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LABOR & ECONOMIC GROWTH
LANSING

KEITH W. COOLEY
DIRECTOR

August 22, 2007

(Document BLR2007-17)

To: Members, Board of Boiler Rules

From: 
Robert J. Aben Jr.

Subject: Verso Paper Request for Certificate Extension on Boiler R342394.

I have reviewed the attached request and the boiler division files for boiler number R342394 and provide the following information. This is a 1982 Water tube boiler manufactured by B&W. The installation was completed in 1985. The unit operates at a 550,000 lb/hr with a maximum capacity of 590,000 lb/hr at 800psi. Safety valves on the steam drum are set at 800psi and 824psi. Reviews of several of the previous repair reports indicate minor tube repairs over the last several years during the annual outages. This unit was re-rated in 2000 from an MAWP of 775psi to 800psi. Calculations were accomplished by B&W using the original construction code.

I am recommending that the request to extend the certification of inspection to June 14, 2008 be granted.

Providing for Michigan's Safety in the Built Environment

Bureau of Construction Codes/Boiler Division
P.O. BOX 30254 • LANSING, MICHIGAN 48909
www.michigan.gov • (517) 241-9334



Verso Paper
Quinnesec Mill
P.O. Box 241
Norway, MI 49870-0241
T 906-779-3639

August 13, 2007

ATTN: Mr. Robert J. Aben Jr., Chief – Boiler Division
Michigan Department of Consumer & Industry Services
Bureau of Construction Codes – Boiler Division
P.O. Box 30254
Lansing, MI 48909

RE: Request for Extension of Inspection Certificate for Boiler MIR342394

Dear Mr. Aben,

Verso Paper's Quinnesec facility is requesting a one-time extension to our current Inspection Certificate for our No. 1 Recovery Boiler. This boiler was manufactured by B&W, beginning installation in 1982 and put into service in 1985. State #R342394, NB # / MFG #: 24665. The boiler's last internal certificate inspection date was October 12th, 2006 with the current certificate expiring on October 12th, 2007.

This request is to extend the current certificate expiration date to June 14, 2008 to support the Quinnesec Mill's strategic plans. If approved, our schedule is to take this boiler off-line on or before June 14th, 2008 to begin inspections and repairs.

Please find attached a supporting letter from our Insurance Company Representative and Authorized Inspector, Mr. Ron Muehrer. Mr. Muehrer is in agreement with our request for an extension of the inspection certificate. If additional technical information is required by the Board of Boiler Rules in considering our request, I will forward to you immediately.

Sincerely,

Ed Chaperon
Manager of Recovery and Utilities
Verso Paper - Quinnesec, MI



August 14, 2007

Attn: Mr. Ed Chaperon
Maintenance and Power Manager
Verso Paper Holdings LLC
P.O. Box 241
Norway, MI 49870
Ed.Chaperon@versopaper.com

Factory Mutual Insurance Company
Chicago Field Engineering
300 S. Northwest Hwy.
Park Ridge, IL 60068 USA
T: 847 430 7000 F: 847 430 7699 www.fmglobal.com

RE: Request for Extension of Inspection Certificate for Boiler MIR342394
Index No. 59797.00
Account No. 1-52426

Dear Mr. Chaperon:

We have reviewed your request for an extension of the inspection certificate of Michigan Boiler MIR342394 from October 12, 2007 to June 14, 2008. We completed the last internal certificate inspection of the boiler on October 12, 2006. The waterside and fireside surfaces of the boiler were in satisfactory condition. We completed an external operating inspection of the boiler on March 2, 2007 and July 24, 2007 which included a review of operating logs and records. Conditions were satisfactory.

We are in agreement with extending the Michigan inspection certificate from October 2007 to June 2008.

You will be submitting a written request to the Michigan Department of Consumer & Industry Services, Bureau of Construction Codes – Boiler Division for an extension of the inspection certificate. Please attach this letter to your request to show that we concur with your request for an extension.

Sincerely,

Ronald E. Muehrer, P.E.
Senior Loss Prevention Specialist
FM Global – Chicago Field Engineering

REM/pab

1cc: FCX/LEX
1cc: REM (e-mail)
1cc: RLT (e-mail)
1cc: FM Global - Dave Lang (e-mail)

Boiler:: R342394

Address: 0 US HWY #2-QUINNESEC 22

Status: ACTIVE

OWNER: VERSO PAPER HOLDINGS LLC

Date: 01/01/1985

Back Stop ☐

First Inspection Information

First Inspection Date: / /

Date Installed: 01/01/1985

Boiler Use: POWER Power Boiler

Other #: 24665

Code: 1 (1=NB, 2=MFG)

Pressure Allowed: 775

S V Pressure: 669

Insurer Number: 200

FM GLOBAL

Inspector Number: 300027

RICHARD KILTINEN

NB Commission Number 0

Owner Name: VERSO PAPER HOLDINGS LLC

Business Nature: 59797.00

Specific Location: RECOVERY BOILER

County: 22 DICKINSON

Construction Type: 1 (1=Wld, 2=Rvt, 3=Lap, 4=Mech)

Boiler Type: 2 (1=FT, 2=WT, 3=CI, 4=Other)

Manufacturer: B & W

Year Built: 1982

Fuel Type: LIQUOR

Method of Firing: AUTO

Pressure Gage(Y/N): Y

Low Water Cutoff: YARWAY

With Manhole(Y/N): Y

Power Boiler Surface: 51,600

Heat Surface: 1 (1=Stamped, 2=Computed)

MRSVC Based On: 1 (1=Stamp, 2=BTU, 3=Grate Area)

LBS/BTU: L

Total LBS/BTU: L

Max Design Steaming Cap: 590,000

MRSVC: 590,000

Total Cap SVC: 734,631

Permit #:

Permit Type:

Contact Person:

Phone:

Contractor License#:

Class:

Boiler: R342394
Status: ACTIVE
Date: 01/01/1985

Address: 0 US HWY #2-QUINNESEC 22
OWNER: VERSO PAPER HOLDINGS LLC

Back Stop

Inspection Information

Current Inspection Information (Invoice/Certificate O=Own, L=Loc)

Date:	10/12/2006	Mail Code:	3	(1=O/L, 2=L/O, 3=O/O, 4=L/L)				
Batch #:	REINSP	Boiler IAB:		(I or Blank)	Class:	MC-3	Boiler Status:	ACTIVE
Multiple:	N	Issue Invoice:	Y	Inspection Cycle:	1	Bill Ins:		
Rule 27 - Test Procedure(Y/N/NA):		N	Next Inspection Due:	10/12/2007				
Int/Ext:		1	(1=Internal, 2=External)	Rule 507 Inspection:	/ /			
LBS/BTU:		L	(L=LBS, B=BTU)	Next Rule 507 Due:	2012			
Total Cap SVC:		734,631	S V Pressure:	800				
Inspector #:	300781	RONALD ELMER MUEHRER	Pressure Allowed:	800				
NB Commission Number:	0	Max Design Steaming Cap:	590,000					
Insurance Co #:	200	FM GLOBAL	MRSVC:	590,000				
Invoice#:	BLR0599814	BTU/HR Input:	0					

Inspection Information

Date	Rule 27	MC	IAB	I/E	L/B	Total Cap SVC	Insp #	Ins Co #	Invoice #	Batch #
04/28/2005	NA	3		1	L	734,631	300027	200	BLR0563530	R 05132
06/10/2004	NA	3		1	L	734,631	300781	200	BLR0539656	R4202
05/14/2003	NA	3		3	L	734,631	300781	200	BLR0503632	R3157A
04/27/2002	NA	3		1	L	525,001	300027	200	BLR0470680	2163HE
05/04/2001	Y	3		1	L	525,001	300027	200	BLR0434637	1150HC

Document BLR2007-20

Review of Chief Inspector's Recommendations for issuance of
licenses from June & September examination

To be handed out at the meeting

ACCIDENT REPORT SEPTEMBER 2007 BOARD MEETING

(Document BLR2007-19)

BOILER LOCATION	BOILER NUMBER	TYPE OF BOILER	PRESSURE AND USE	TYPE OF FAILURE	CAUSE OF FAILURE	DAMAGE TO BOILER	NUMBER INJURED	DATE OF FAILURE	DATE OF INSPECTION	INSURANCE OR STATE
Scranton Middle School 8415 Maltby Brighton, MI 48116	R415149	WT	50 psi HWH	Furnace Explosion	Noncompliance Rule 27	Burner and casing, Blr to be replaced.	0	Unknown	2/10/07	Insurance
Kinross Correctional 16770 S Water Tower Kincheloe, MI 49788	R411135	FT	150 psi power boiler	Furnace Explosion	Fuel oil delivery design problem	Refractory and fire brick damage	0	Unknown	1/25/07	Insurance
St Catherine Laboure Church 211 Harmon St Concord, Mi 49237	R376669	WT	30 psi HWH	Over heat	Unknown	Coil	0	Unknown	11/01/06	Insurance
Pine Tech Inc 1560 W Houghton Lk Rd Lake City, MI 49721	R415237	FT/WT	15 psi Process	Operator error caused dry fire condition	Operator error No CSD-1 testing performed.	Upper tubes discolored, hand hole gasket deformed.	0	12/24/06	12/28/06	State
Kaiser Elementary School 670 Onandago St Ypsilanti, MI 48198	R340347	WT	15 psi Steam heating	Dry fire	Possible fire eye control	Tubes sagged, inner casing warped, steam drum discolored.	0	10/10/06	11/14/06	Insurance
Muskegon Christian Elementary 1220 Eastgate Muskegon, MI 49442	R357270	CI	15 psi Steam heating	Dry fire	LWCO	Cracked sections	0	12/17/06	01/08/07	Insurance State did investigation
Horizon Enterprise Inc 20600 Eureka Rd Taylor, MI 48180	R306250	WT	15 psi Steam heating	Dry fire	LWCO	Unknown	0	01/20/07	01/29/07	Insurance

Coleman Middle School 991 E Railway rd Coleman, MI 48618	R359910	FY	Steam Heating	Dry fire	LWCO	Excessive water make-up and poor maintenance	0	03/12/07	03/15/07	Insurance
Theta Chi Alumni 87 Franklin Blvd Pontiac, MI 48341	R370435	CI	Steam heating	Cracked Section	Assume controls worked properly	Cracked Section	0	10/15/06	11/03/07	Insurance

Notes:

- R415149 – CSD-1 has been performed however, testing discovered a high pressure gas switch that did not function and must be replaced.
R411135 – Corrective action taken. Pump replaced with a 6 gpm and supply pipe size increased to 1 ½ “.
R415237 – Tube material was tested and test reports reviewed by licensee.

RECEIVED

Accident Report - Boiler or Pressure Vessel

FEB 23 2007

Michigan Department of Labor & Economic Growth

Bureau of Construction Codes & Fire Safety

Boiler Division

P.O. Box 30254, Lansing, MI 48909

(517) 241-9334

Boiler Division

ACCIDENT DATE

- ☐ Boiler Explosion
☒ Furnace Explosion
☐ Dry Fired
☐ Other (explain)

Authority: 1965 PA 290
Completion: Mandatory
Penalty: None

The Department of Labor & Economic Growth will not discriminate against any individual or group because of race, sex, religion, age, national origin, color, marital status, disability, or political belief. If you need help with reading, writing, hearing, etc., under the Americans with Disabilities Act, you may make your needs known to this agency.

Mail original copy of accident report to the address listed above.

Boiler Information

BOILER LOCATION <i>Scanton Middle School</i>				
ADDRESS <i>8415 Mulloy</i>		CITY <i>Brighton</i>	STATE <i>MI</i>	ZIP CODE <i>48116</i>
OWNER NAME <i>Brighton School District</i>				
ADDRESS <i>7775 Donleigh Dr.</i>		CITY <i>Brighton</i>	STATE <i>MI</i>	ZIP CODE <i>48116</i>
BOILER CONSTRUCTION <input type="checkbox"/> WELD <input type="checkbox"/> RIVET <input type="checkbox"/> LAP <input checked="" type="checkbox"/> MECHANICAL ASSEMBLY			BOILER TYPE <input type="checkbox"/> FT <input checked="" type="checkbox"/> WT <input type="checkbox"/> CAST <input type="checkbox"/> OTHER	
BOILER MANUFACTURER <i>Lochinvar</i>				
STATE NUMBER <i>M 415149</i>	MFG. SERIAL NUMBER	NATIONAL BOARD NUMBER <i>00189394</i>	MAWP <i>160</i>	YEAR BUILT <i>2006</i>
SAFETY / RELIEF VALVE INSTALLED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		SET PRESSURE <i>50</i>	ASME / NB STAMPED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	CAPACITY <i>1,954,000 BTU/Hr</i>
BOILER USED FOR <input type="checkbox"/> POWER <input type="checkbox"/> PROCESS <input type="checkbox"/> STEAM HEATING <input checked="" type="checkbox"/> HWH <input type="checkbox"/> HWS <input type="checkbox"/> OTHER (Specify)				
CSD-1 TESTING <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A		CSD-1 TEST LAST PERFORMED <i>None done</i>	BY WHOM	BTU / HR INPUT <i>1,500,000</i>
IS CERTIFICATE CURRENT <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		(none not yet paid) <i>Initial inspection 11/22/06</i>		EXPIRATION DATE <i>11/22/09</i>
DOES JURISDICTION REQUIRE LICENSED OPERATOR <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			WERE OPERATORS LICENSED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
TYPE OF BUSINESS WHERE USED <i>school</i>		NUMBER KILLED <i>0</i>	NUMBER INJURED <i>0</i>	

Personal Injury

NAME OF PERSON INJURED <i>N/A</i>	NAME OF PERSON INJURED
ADDRESS OF PERSON INJURED	ADDRESS OF PERSON INJURED
EXTENT OF INJURY	EXTENT OF INJURY
HOSPITALIZED <input type="checkbox"/> YES <input type="checkbox"/> NO	HOSPITALIZED <input type="checkbox"/> YES <input type="checkbox"/> NO

Witnesses Interviewed

NAME <i>Edward R. Revickly</i>	ADDRESS <i>8571 Pineview Ln Dr.</i>	CITY <i>Linden</i>	STATE <i>MI</i>	ZIP CODE <i>48451</i>
NAME	ADDRESS	CITY	STATE	ZIP CODE
NAME	ADDRESS	CITY	STATE	ZIP CODE

Accident

PROPERTY DAMAGE (Be specific. Include dollar amounts. Attach a separate page if necessary)

Damage limited to boiler furnace area + casing, mostly bent metal. Air inlet + a couple of metal pieces knocked off of boiler. No other property damage

TYPE OF ACCIDENT (Explosion, Dry Fired, Rupture, etc.)

Furnace Explosion

DESCRIBE THE CAUSE AND EVENTS WHICH PRECEDED THE ACCIDENT. DESCRIBE IN DETAIL THE EXTENT AND PARTS DAMAGED

Boiler installed Nov. 2006. 2/10/07 06:15 AM, operator found boiler 91D on a flame failure. operator hit the reset button over + system started it's pump cycle. operator went to check other boiler + pumps in boiler room. operator heard a click (he thinks probably gas valve) and then the boiler furnace exploded.

DAMAGE TO BOILER

Damage to burner area + casing of boiler Boiler to be replaced at MFG expense

CAN BOILER BE REPAIRED

☒ YES ☐ NO

REPAIR PERMIT REQUIRED

☐ YES ☐ NO

WERE DAMAGED PARTS EXAMINED

☒ YES ☐ NO IF NO, WHY

BASED ON YOUR INVESTIGATION, PLEASE PROVIDE YOUR OPINION OF THE CAUSE OF ACCIDENT

Boiler installed by John E. Green Co. + initially started by halimur. John E. Green thought MFG. was doing CSD-1, MFG said CSD-1 to be done by the contractor. Ignition of excessive gas occurred in boiler, assume control failure.

INSPECTOR'S RECOMMENDATION

Do CSD-1 on all other boilers installed; John E. Green doing CSD-1 tests

WHAT HAS BEEN DONE OR WILL BE DONE TO PREVENT RECURRENCE OF LIKE OR SIMILAR FAILURES

John E. Green doing CSD-1 checks on all other newly installed boilers.

Other Investigative Agencies

WERE OTHER INVESTIGATIVE AGENCIES INTERVIEWED		IS A REPORT AVAILABLE		WERE PHOTOGRAPHS TAKEN		ARE PHOTOGRAPHS ATTACHED TO REPORT	
<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
NAME	ADDRESS	CITY	STATE	ZIP CODE			
NAME	ADDRESS	CITY	STATE	ZIP CODE			

Inspector

NAME OF INSPECTOR	LICENSE NUMBER	DATE OF REPORT
LAWRENCE R. BLACK	300840	2/15/07

Permit: RP034895

Address: 8415 MALTBY ROAD-BRIGHTON 47

Status: CLOSED

BLRINSTALL: GREEN PETER J

Date: 08/25/2006

Back Stop ☐

Boiler Permit Information

Permit Type: **INS** Installation Permit

Update

Exit

Back

Boiler Use: **HWH** Hot Water Heat

Construction Type: **1** (1=Welded, 2=Rivited, 3=Lap, 4=Mech)

Owner Name: BRIGHTON AREA SCHOOLS

County: **47** LIVINGSTON

Contractor License#: **310436** Class: **5B**

Violation:

Contact Person: MARK MOYER

Phone: 517-719-1087

Boiler Number: 415149

Manufacturer: LOCHINVAR

Permit Status: **CLOSED**

Maximum Pressure: 160

Applied: 08/25/2006

Other #: Code: **0** (1=NB, 2=MFG)

Issued: 08/28/2006

Inspector Number: 301060 JOHN H PRAY

Complete: 01/03/2007

Insurer Number: 1 STATE OF MICHIGAN

Business Nature:

Permit Fee: \$60.00

Specific Location:

Additional Fees: \$0.00

Boiler Type: **2** (1=FT, 2=WT, 3=Cl, 4=Other)

Total All Fees: \$60.00

LBS/BTU: **B** MSVC: 1,500,000

Payments Rcvd: \$60.00

Balance Due: \$0.00

Boiler: R415149 Address: 8415 MALTBY ROAD-BRIGHTON 47
Status: ACTIVE OWNER: BRIGHTON AREA SCHOOLS
Date: 01/08/2007

Back Stop

First Inspection Information

First Inspection Date: 11/22/2006 Date Installed: 11/22/2006
Boiler Use: HWH Hot Water Heat
Other #: 189394 Code: 1 (1=NB, 2=MFG)
Pressure Allowed: 125 S V Pressure: 50
Insurer Number: 8082 HARTFORD STEAM BOILER
Inspector Number: 301060 JOHN H PRAY NB Commission Number: 10877
Owner Name: BRIGHTON AREA SCHOOLS
Business Nature: SCHOOL
Specific Location: County: 47 LIVINGSTON
Construction Type: 1 (1=Wld, 2=Rvt, 3=Lap, 4=Mech) Boiler Type: 2 (1=FT, 2=WT, 3=CI, 4=Other)
Manufacturer: LOCHINVAR Year Built: 2006
Fuel Type: GAS Method of Firing: AUTO Pressure Gage(Y/N): Y
Low Water Cutoff: FLOW SWITCH With Manhole(Y/N): N
Power Boiler Surface: 0 Heat Surface: (1=Stamped, 2=Computed)
MRSVC Based On: 1 (1=Stamp, 2=BTU, 3=Grate Area) LBS/BTU: B Total LBS/BTU: B
Max Design Steaming Cap: 1,568,000 MRSVC: 1,568,000 Total Cap SVC: 1,952,000
Permit #: 34895 Permit Type: INS
Contact Person: Phone:
Contractor License#: 310436 Class:

Boiler: R415149 Address: 8415 MALTBY ROAD-BRIGHTON 47
Status: ACTIVE OWNER: BRIGHTON AREA SCHOOLS
Date: 01/08/2007

Back Stop

Inspection Information

Current Inspection Information (Invoice/Certificate O=Own, L=Loc)
Date: 11/22/2006 Mail Code: 3 (1=O/L, 2=L/O, 3=O/O, 4=L/L)
Batch #: FIRST Boiler IAB: (I or Blank) Class: MC-3 Boiler Status: ACTIVE
Multiple: Y Issue Invoice: Y Inspection Cycle: 3 Bill Ins:
Rule 27 - Test Procedure(Y/N/NA): N
Int/Ext: 2 (1=Internal, 2=External)
LBS/BTU: B (L=LBS, B=BTU)
Total Cap SVC: 1,952,000
Inspector #: 301060 JOHN H PRAY
NB Commission Number: 10877
Insurance Co #: 1 STATE OF MICHIGAN
Invoice#: BLR0604179
Next Inspection Due: 11/21/2009
Rule 507 Inspection: / /
Next Rule 507 Due: 2036
S V Pressure: 50
Pressure Allowed: 125
Max Design Steaming Cap: 1,568,000
MRSVC: 1,568,000
BTU/HR Input: 1,500,000

Inspection Information

Date	Rule 27	MC	IAB	I/E	L/B	Total Cap SVC	Insp #	Ins Co #	Invoice #	Batch #
/ /		0		0		0	0	0		
/ /		0		0		0	0	0		
/ /		0		0		0	0	0		
/ /		0		0		0	0	0		
/ /		0		0		0	0	0		

Permit:	RP037746	Address:	8415 MALTBY ROAD-BRIGHTON 47
Status:	ISSUE	BLRINSTALL:	GREEN PETER J
Date:	04/12/2007		

Back Stop

Boiler Permit Information

Permit Type:	INS	Installation Permit	Update	Exit	Ba
Boiler Use:	HWH	Hot Water Heat			
Construction Type:	1	(1=Welded, 2=Rivited, 3=Lap, 4=Mech)			
Owner Name:	BRIGHTON AREA SCHOOLS	County:	47	LIVINGSTON	
Contractor License#:	310436	Class:	5B	Violation:	
Contact Person:	TERRY DALIAN	Phone:	313-868-2400		
Boiler Number:					
Manufacturer:	LOCHINVAR	Permit Status:	ISSUED		
Maximum Pressure:	160	Applied:	04/12/2007		
Other #:		Code:	0	(1=NB,2=MFG)	
Inspector Number:	301053	FELICISIMO S VILLARAMA	Issued:	04/16/2007	
Insurer Number:	1	STATE OF MICHIGAN	Complete:	/ /	
Business Nature:		Permit Fee:	\$60.00		
Specific Location:		Additional Fees:	\$0.00		
Boiler Type:	4	(1=FT, 2=WT, 3=CI, 4=Other)	Total All Fees:	\$60.00	
LBS/BTU:	B	MSVC:	1,500,000	Payments Rcvd:	\$60.00
				Balance Due:	\$0.00

Accident Report - Boiler or Pressure Vessel
Michigan Department of Labor & Economic Growth
Bureau of Construction Codes & Fire Safety
Boiler Division
P.O. Box 30254, Lansing, MI 48909
(517) 241-9334

ACCIDENT DATE

1-19-07

- ☐ Boiler Explosion
- ☒ Furnace Explosion
- ☐ Dry Fired
- ☐ Other (explain) _____

Authority 1965 PA 290
Completion Mandatory
Penalty None

The Department of Labor & Economic Growth will not discriminate against any individual or group because of race, sex, religion, age, national origin, color, mental status, disability, or political belief. If you need help with reading, writing, hearing, etc., under the Americans with Disabilities Act, you may make your needs known to this agency.

Mail original copy of accident report to the address listed above.

Boiler Information

BOILER LOCATION <u>KINROSS CORRECTIONAL</u>				
ADDRESS <u>16770 S. WATER TOWER</u>		CITY <u>KINCHELOE</u>	STATE <u>MI</u>	ZIP CODE <u>49788</u>
OWNER NAME <u>STATE OF MICHIGAN / DEPT OF CORRECTIONS</u>				
ADDRESS <u>5086 M-80 WEST</u>		CITY <u>LANSING / KINCHELOE</u>	STATE <u>MI</u>	ZIP CODE <u>48909/49788</u>
BOILER CONSTRUCTION <input checked="" type="checkbox"/> WELD <input type="checkbox"/> RIVET <input type="checkbox"/> LAP <input type="checkbox"/> MECHANICAL ASSEMBLY		BOILER TYPE <input checked="" type="checkbox"/> FT <input type="checkbox"/> WT <input type="checkbox"/> CAST <input type="checkbox"/> OTHER _____		
BOILER MANUFACTURER <u>CLEAVER BROOKS</u>				
STATE NUMBER <u>M 411135 M</u>	MFG. SERIAL NUMBER <u>B-36</u>	NATIONAL BOARD NUMBER <u>NB 13766</u>	MAWP <u>150</u>	YEAR BUILT <u>2006</u>
SAFETY / RELIEF VALVE INSTALLED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		SET PRESSURE <u>150</u>	ASME / NB STAMPED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	CAPACITY <u>ADEQUATE</u>
BOILER USED FOR <input checked="" type="checkbox"/> POWER <input type="checkbox"/> PROCESS <input type="checkbox"/> STEAM HEATING <input type="checkbox"/> HWH <input type="checkbox"/> HWS <input type="checkbox"/> OTHER (Specify) _____				
CSD-1 TESTING <input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A		CSD-1 TEST LAST PERFORMED	BY WHOM	BTU / HR INPUT <u>16329000</u>
IS CERTIFICATE CURRENT <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			EXPIRATION DATE <u>7-15-07</u>	
DOES JURISDICTION REQUIRE LICENSED OPERATOR <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			WERE OPERATORS LICENSED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
TYPE OF BUSINESS WHERE USED <u>PRISON</u>		NUMBER KILLED <u>0</u>	NUMBER INJURED <u>0</u>	

Personal Injury

NAME OF PERSON INJURED	NAME OF PERSON INJURED
ADDRESS OF PERSON INJURED	ADDRESS OF PERSON INJURED
EXTENT OF INJURY	EXTENT OF INJURY
HOSPITALIZED <input type="checkbox"/> YES <input type="checkbox"/> NO	HOSPITALIZED <input type="checkbox"/> YES <input type="checkbox"/> NO

Witnesses Interviewed

NAME	ADDRESS	CITY	STATE	ZIP CODE
NAME	ADDRESS	CITY	STATE	ZIP CODE
NAME	ADDRESS	CITY	STATE	ZIP CODE

Accident

PROPERTY DAMAGE (Be specific. Include dollar amounts. Attach a separate page if necessary)

NONE

TYPE OF ACCIDENT (Explosion, Dry Fired, Rupture, etc.)

FURNACE EXPLOSION

DESCRIBE THE CAUSE AND EVENTS WHICH PRECEDED THE ACCIDENT. DESCRIBE IN DETAIL THE EXTENT AND PARTS DAMAGED.

THE BOILERS WERE TO BE TESTED FOR 24 HOURS USING FUEL OIL. (NORMAL GAS OPERATION) THEY WERE ON A LEAD (#1), LAG (#2) AND LAG-LAG (#3). #3 KEPT TRIPPING ON LOW FUEL PRESSURE (3 TIMES). #1 AND #2 WERE OPERATING UNTIL #2 TRIPPED ON LOW FUEL PRESSURE, WHICH MADE #3 THE LAG BOILER WHICH ATTEMPTED TO FIRE WHEN EXPLOSION OCCURRED

DAMAGE TO BOILER

CRACKED REFRACTORY ON REAR DOOR. CRACKED FIRE BRICKS AROUND FURNACE OPENING. STACK TO BE CHECKED

CAN BOILER BE REPAIRED

☒ YES ☐ NO
REPAIR PERMIT REQUIRED

☐ YES ☒ NO

WERE DAMAGED PARTS EXAMINED

☒ YES ☐ NO IF NO, WHY

BASED ON YOUR INVESTIGATION, PLEASE PROVIDE YOUR OPINION OF THE CAUSE OF ACCIDENT

THE PROBLEM APPEARS TO BE IN THE FUEL DELIVERY SYSTEM. THE 1 1/2" LINE DOES NOT SEEM ADEQUATE TO COMPENSATE FOR THE PRESSURE DROP FROM THE TANK TO THE BOILERS

INSPECTOR'S RECOMMENDATION

THIS IS A NEW SYSTEM AND THE BOILERS ARE GOING THROUGH TESTING. WE RECOMMEND CONTACTING THE SYSTEM ENGINEER TO DETERMINE THE SIZE OF FUEL LINE REQUIRED AND ANY UNNECESSARY PRESSURE DROPS IN THE LINE

WHAT HAS BEEN DONE OR WILL BE DONE TO PREVENT RECURRENCE OF LIKE OR SIMILAR FAILURES

ANY CHANGES IN THE SYSTEM DESIGN SHOULD CORRESPOND WITH A REVISED START-UP AND OPERATING PROCEDURE.

Other Investigative Agencies

WERE OTHER INVESTIGATIVE AGENCIES INTERVIEWED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	IS A REPORT AVAILABLE <input type="checkbox"/> YES <input type="checkbox"/> NO	WERE PHOTOGRAPHS TAKEN <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	ARE PHOTOGRAPHS ATTACHED TO REPORT <input type="checkbox"/> YES <input type="checkbox"/> NO
NAME	ADDRESS	CITY	STATE ZIP CODE
NAME	ADDRESS	CITY	STATE ZIP CODE

Inspector

NAME OF INSPECTOR TIM SHEAHAN	LICENSE NUMBER MI 853	DATE OF REPORT 1-25-07
----------------------------------	--------------------------	---------------------------

Boiler: R411135 Address: 5086 M80 WEST - KINCHELOE 17
Status: ACTIVE OWNER: DEPARTMENT OF CORRECTIONS
Date: 02/16/2006 Back Stop ☐

First Inspection Information

First Inspection Date: _/_/_/____ Date Installed: 01/27/2006
Boiler Use: POWER Power Boiler
Other #: 13766 Code: 1 (1=NB, 2=MFG)
Pressure Allowed: 150 S V Pressure: 150
Insurer Number: 8082 HARTFORD STEAM BOILER
Inspector Number: 301055 MARK A WHEELER NB Commission Number 0
Owner Name: DEPARTMENT OF CORRECTIONS
Business Nature: PRISON
Specific Location: _____ County: 17 CHIPPEWA
Construction Type: 1 (1=Wld, 2=Rvt, 3=Lap, 4=Mech) Boiler Type: 1 (1=FT, 2=WT, 3=CI, 4=Other)
Manufacturer: CLEAVER BROOKS Year Built: 2005
Fuel Type: GAS Method of Firing: AUTO Pressure Gage(Y/N): Y
Low Water Cutoff: FLOAT With Manhole(Y/N): Y
Power Boiler Surface: 2,000 Heat Surface: 1 (1=Stamped, 2=Computed)
MRSVC Based On: 1 (1=Stamp, 2=BTU, 3=Grate Area) LBS/BTU: L Total LBS/BTU: L
Max Design Steaming Cap: 13,800 MRSVC: 13,800 Total Cap SVC: 17,401
Permit #: 31223 Permit Type: _____
Contact Person: _____ Phone: _____
Contractor License#: _____ Class: _____

Boiler: R411134 Address: 5086 M80 WEST - KINCHELOE 17
Status: ACTIVE OWNER: DEPARTMENT OF CORRECTIONS
Date: 02/16/2006 Back Stop ☐

First Inspection Information

First Inspection Date: _/_/_/____ Date Installed: 01/27/2006
Boiler Use: POWER Power Boiler
Other #: 13767 Code: 1 (1=NB, 2=MFG)
Pressure Allowed: 150 S V Pressure: 150
Insurer Number: 8082 HARTFORD STEAM BOILER
Inspector Number: 301055 MARK A WHEELER NB Commission Number 0
Owner Name: DEPARTMENT OF CORRECTIONS
Business Nature: PRISON
Specific Location: _____ County: 17 CHIPPEWA
Construction Type: 1 (1=Wld, 2=Rvt, 3=Lap, 4=Mech) Boiler Type: 1 (1=FT, 2=WT, 3=CI, 4=Other)
Manufacturer: CLEAVER BROOKS Year Built: 2005
Fuel Type: GAS Method of Firing: AUTO Pressure Gage(Y/N): Y
Low Water Cutoff: FLOAT With Manhole(Y/N): Y
Power Boiler Surface: 2,000 Heat Surface: 1 (1=Stamped, 2=Computed)
MRSVC Based On: 1 (1=Stamp, 2=BTU, 3=Grate Area) LBS/BTU: L Total LBS/BTU: L
Max Design Steaming Cap: 13,800 MRSVC: 13,800 Total Cap SVC: 17,401
Permit #: 31222 Permit Type: _____
Contact Person: _____ Phone: _____
Contractor License#: _____ Class: _____

Boiler: R411133
Status: ACTIVE
Date: 02/16/2006

Address: 5086 M80 WEST - KINCHELOE 17
OWNER: DEPARTMENT OF CORRECTIONS

Back Stop ☐

First Inspection Information

First Inspection Date:	<input type="text" value="___/___/___"/>	Date Installed:	<input type="text" value="01/27/2006"/>
Boiler Use:	<input type="text" value="POWER"/> <input type="button" value="Power Boiler"/>		
Other #:	<input type="text" value="13760"/>	Code:	<input type="text" value="1"/> (1=NB, 2=MFG)
Pressure Allowed:	<input type="text" value="150"/>	S V Pressure:	<input type="text" value="150"/>
Insurer Number:	<input type="text" value="8082"/>	<input type="text" value="HARTFORD STEAM BOILER"/>	
Inspector Number:	<input type="text" value="301055"/>	<input type="text" value="MARK A WHEELER"/>	NB Commission Number <input type="text" value="0"/>
Owner Name:	<input type="text" value="DEPARTMENT OF CORRECTIONS"/>		
Business Nature:	<input type="text" value="PRISON"/>		
Specific Location:	<input type="text"/>		County: <input type="text" value="17"/> <input type="text" value="CHIPPEWA"/>
Construction Type:	<input type="text" value="1"/> (1=Wld, 2=Rvt, 3=Lap, 4=Mech)	Boiler Type:	<input type="text" value="1"/> (1=FT, 2=WT, 3=Cl, 4=Other)
Manufacturer:	<input type="text" value="CLEAVER BROOKS"/>		Year Built: <input type="text" value="2005"/>
Fuel Type:	<input type="text" value="GAS"/>	Method of Firing:	<input type="text" value="AUTO"/> <input type="text" value="Pressure Gage(Y/N):Y"/>
Low Water Cutoff:	<input type="text" value="FLOAT"/>	With Manhole(Y/N):	<input type="text" value="Y"/>
Power Boiler Surface:	<input type="text" value="2,000"/>	Heat Surface:	<input type="text" value="1"/> (1=Stamped, 2=Computed)
MRSVC Based On:	<input type="text" value="1"/> (1=Stamp, 2=BTU, 3=Grate Area)	LBS/BTU:	<input type="text" value="L"/> <input type="text" value="Total LBS/BTU:L"/>
Max Design Steaming Cap:	<input type="text" value="13,800"/>	MRSVC:	<input type="text" value="13,800"/> <input type="text" value="Total Cap SVC: 17,401"/>
Permit #:	<input type="text" value="31221"/>	Permit Type:	<input type="text"/>
Contact Person:	<input type="text"/>		Phone: <input type="text"/>
Contractor License#:	<input type="text"/>	Class:	<input type="text"/>

Boiler: R411133
Status: ACTIVE
Date: 02/16/2006

Address: 5086 M80 WEST - KINCHELOE 17
OWNER: DEPARTMENT OF CORRECTIONS

Back Stop

Inspection Information

Current Inspection Information

(Invoice/Certificate 0=Own, L=Loc)

Date: 12/14/2006 Mail Code: 3 (1=O/L, 2=L/O, 3=O/O, 4=L/L)
Batch #: REINSP Boiler IAB: (I or Blank) Class: MC-3 Boiler Status: ACTIVE
Multiple: N Issue Invoice: Y Inspection Cycle: 1 Bill Ins
Rule 27 - Test Procedure(Y/N/NA): N
Int/Ext: 2 (1=Internal, 2=External)
LBS/BTU: L (L=LBS, B=BTU)
Total Cap SVC: 17,404
Inspector #: 300853 TIMOTHY SHEAHEN
NB Commission Number: 10913
Insurance Co #: 8082 HARTFORD STEAM BOILER
Invoice#: BLR0605176

Next Inspection Due: 07/15/2007
Rule 507 Inspection: / /
Next Rule 507 Due: 2036
S V Pressure: 150
Pressure Allowed: 150
Max Design Steaming Cap: 13,800
MRSVC: 13,800
BTU/HR Input: 16,329,000

Inspection Information

Date	Rule 27	MC	IAB	I/E	L/B	Total Cap SVC	Insp #	Ins Co #	Invoice #	Batch #
01/27/2006	NA	3		2	L	17,401	301055	8082	BLR0577074	FIRST
/ /		0		0		0	0	0		
/ /		0		0		0	0	0		
/ /		0		0		0	0	0		
/ /		0		0		0	0	0		

MICHIGAN DEPARTMENT OF CONSUMER & INDUSTRY SERVICES
BUREAU OF CONSTRUCTION CODES/BOILER DIVISION
PO BOX 30254 * LANSING, MI 48909
(517) 241-9334

ACCIDENT REPORT – BOILER OR PRESSURE VESSEL

AUTHORITY: Act 290, Public Acts of 1965 COMPLETION: Mandatory PENALTY: None		ACCIDENT DATE <u>10/19/06 or prior</u>	
1. BOILER LOCATION: <u>ST CATHERINE LABOURE CHURCH</u>			
2. ADDRESS (City-State-ZIP) <u>211 HARMON ST. CONCORD, MI 49237</u>			
3. BOILER MANUFACTURER <u>LOCHINVAR</u>			
4. BOILER TYPE (✓) Check One <input type="checkbox"/> Weld <input type="checkbox"/> Rivet Wt. <u>XXX</u> Ft. <u> </u> Cl. <u> </u>			
5. STATE NUMBER <u>M376669M</u>	6. MFG SERIAL NUMBER <u> </u>	7. NATIONAL BOARD NUMBER <u>NB048393</u>	8. MAWP <u>00150</u>
9. YEAR BUILT <u>1995</u>			
10. SAFETY/RELIEF VALVE INSTALLED (✓) Check One <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		11. SET PRESSURE <u>30</u>	
		12. ASME/NB STAMPED (✓) Check One <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
13. BOILER USED FOR (✓) Check Appropriate Box (es) <input type="checkbox"/> Power <input type="checkbox"/> Process <input type="checkbox"/> Steam Heating <input checked="" type="checkbox"/> HWH <input type="checkbox"/> HWS <input type="checkbox"/> Other (Specify) <u> </u>			
14. DOES JURISDICTION REQUIRE PERIODIC INSPECTION <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		15. CERTIFICATION ISSUED <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
		16. EXPIRATION DATE <u>3/20/09</u>	
17. DOES JURISDICTION REQUIRE LICENSED OPERATOR <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		18. WERE OPERATORS LICENSED <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
19. TYPE OF BUSINESS WHERE USED <u>CHURCH</u>	20. NUMBER KILLED <u>0</u>	21. NUMBER INJURED <u>0</u>	
22. PROPERTY DAMAGE (Be specific. Include dollar amounts. Attach a separate page if necessary.) <u>Coil burned up due to lack of flow through exchanger. Contractor estimates approximately 3000 dollars to replace coil and backplate. The boiler casing, although discolored at the exhaust flue plenum, is in serviceable condition. The rest of the boiler is in acceptable condition as well. Technically, although the entire boiler is not being replaced, the new coil is an ASME certified unit and is the actual pressure retaining vessel with its own NB registration number and should require a new state number. There were no damages outside of the boiler. The boiler is equipped with a probe low water cutoff, which, although it did nothing to prevent the coil from overheating, may have shut off the burner in time to prevent further fire damages to the property or adjacent equipment. The vessel in question has a maximum BTU input of 320,000 and does not require a flow switch.</u>			
23. TYPE OF ACCIDENT (Explosion, dry fired, rupture, etc.) <u>Burning of coil - no flow in WT boiler requiring forced circulation to prevent overheating</u>			
24. DESCRIBE CAUSE OF ACCIDENT (Be specific. Attach a separate page if necessary.) <u>Improper valve or control switch manipulation. The system is a two pipe system that must be manually switched over from A/C to heat and vice versa. The contractor came in to switch the system to Heat on 10/20/06 and discovered the burned coil. The contractor believes the switches (which are at hip level) may have been inadvertently operated. The coil was replaced on 11/1/06. It is not known when the unit actually burned up, save that it must have happened sometime over the summer while the system was aligned for air conditioning. Steve Massie, Technician for Grindall & White / Bus # 517-784-7124, Cell 517-206-0869 Jan Dye, Secretary for St Catherine's 517-524-7578</u>			
25. DESCRIBE DAMAGE TO BOILER (Be specific. Attach a separate page if necessary.) <u>coil burned up. Back plate that secures burner was damaged</u>			

Mail Original Copy of Accident Report To: MICHIGAN DEPARTMENT OF CONSUMER & INDUSTRY SERVICES
BUREAU OF CONSTRUCTION CODES/BOILER DIVISION
PO BOX 30254
LANSING, MI 48909

26. REPORTED BY (Inspector) <u>James Russell</u> 	27. COMPANY <u>HSB I&I</u>	28. SUPERVISOR <u>Dan L. Harris</u>	29. DATE <u>11/7/06</u>
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BCC-1049 (3-98) HSB

Boiler: R376669 Address: 211 HARMON-CONCORD 38
Status: INVOICE OWNER: ST CATHERINE CHURCH
Date: 01/01/1995 Back Stop

First Inspection Information

First Inspection Date: _/ _/ _ Date Installed: 01/01/1995
Boiler Use: HWH Hot Water Heat
Other #: 48393 Code: 1 (1=NB, 2=MFG)
Pressure Allowed: 150 S V Pressure: 30
Insurer Number: 1 STATE OF MICHIGAN
Inspector Number: 301066 PHIL JACOBSEN NB Commission Number 0
Owner Name: ST CATHERINE CHURCH
Business Nature: CHURCH
Specific Location: CHURCH County: 38 JACKSON
Construction Type: 1 (1=Wld, 2=Rvt, 3=Lap, 4=Mech) Boiler Type: 2 (1=FT, 2=WT, 3=CI, 4=Other)
Manufacturer: LI LOCHINVAR Year Built: 1994
Fuel Type: GAS Method of Firing: AUTO Pressure Gage(Y/N): Y
Low Water Cutoff: PROBE With Manhole(Y/N): N
Power Boiler Surface: 0 Heat Surface: (1=Stamped, 2=Computed)
MRSVC Based On: 1 (1=Stamp, 2=BTU, 3=Grate Area) LBS/BTU: B Total LBS/BTU: B
Max Design Steaming Cap: 305,000 MRSVC: 305,000 Total Cap SVC: 510,000
Permit #: Permit Type:
Contact Person: Phone:
Contractor License#: Class:

Boiler: R376669 Address: 211 HARMON-CONCORD 38
Status: INVOICE OWNER: ST CATHERINE CHURCH
Date: 01/01/1995 Back Stop

Inspection Information

Current Inspection Information (Invoice/Certificate O=Own, L=Loc)
Date: 07/31/2007 Mail Code: 1 (1=O/L, 2=L/O, 3=O/O, 4=L/L)
Batch #: REINSTAL Boiler IAB: (I or Blank) Class: MC-1 Boiler Status: INVOICE
Multiple: N Issue Invoice: Y Inspection Cycle: 3 Bill Ins:
Rule 27 - Test Procedure(Y/N/NA): N 1
Int/Ext: 2 (1=Internal, 2=External)
LBS/BTU: B (L=LBS, B=BTU)
Total Cap SVC: 510,000
Inspector #: 301071 ALBERT LADD
NB Commission Number: 6908
Insurance Co #: 1 STATE OF MICHIGAN
Invoice#: BLR0621561
Next Inspection Due: 07/30/2010
Rule 507 Inspection: _/ _/ _
Next Rule 507 Due: 2024
S V Pressure: 30
Pressure Allowed: 150
Max Design Steaming Cap: 305,000
MRSVC: 305,000
BTU/HR Input: 315,000

Inspection Information

Date	Rule 27	MC	IAB	I/E	L/B	Total Cap SVC	Insp #	Ins Co #	Invoice #	Batch #
03/20/2006	NA	1		2	B	510,000	300670	8082	BLR0580104	REINSP
04/22/2003	NA	1		2	B	510,000	301066	1	BLR0500784	M3126B
10/06/2000	Y	1		1	B	510,000	301066	1	BLR0416999	0319GA
07/29/1998		1		2	B	510,000	301054	8082		8223GA
//_		0		0		0	0	0		

Permit: RP038266 Address: 211 HARMON - CONCORD 38
Status: CLOSED BLRINSTALL: ZELLER THOMAS A
Date: 06/07/2007

Back Stop

Boiler Permit Information

Permit Type:	INS	Installation Permit	Update	Exit	Back	
Boiler Use:	HWH	Hot Water Heat				
Construction Type:	4	(1=Welded, 2=Rivited, 3=Lap, 4=Mech)				
Owner Name:	ST CATHERINES CHURCH	County:	38	JACKSON		
Contractor License#:	313519	Class:	4B	Violation:		
Contact Person:		Phone:				
Boiler Number:	376669					
Manufacturer:	LOCHINVAR	Permit Status:	CLOSED			
Maximum Pressure:	30	Applied:	06/07/2007			
Other #:	J940735	Code:	2	(1=NB,2=MFG)	Issued:	06/11/2007
Inspector Number:	301071	ALBERT LADD	Complete:	08/13/2007		
Insurer Number:	1	STATE OF MICHIGAN				
Business Nature:	CHRUCH	Permit Fee:	\$60.00			
Specific Location:		Additional Fees:	\$0.00			
Boiler Type:	2	(1=FT, 2=WT, 3=CI, 4=Other)	Total All Fees:	\$60.00		
LBS/BTU:	B	MSVC:	315,000	Payments Rcvd:	\$60.00	
				Balance Due:	\$0.00	

Accident Report - Boiler or Pressure Vessel

Michigan Department of Labor & Economic Growth

Bureau of Construction Codes & Fire Safety

Boiler Division

P.O. Box 30254, Lansing, MI 48909

(517) 241-9334

ACCIDENT DATE

12/24/06

- ☐ Boiler Explosion
☐ Furnace Explosion
☒ Dry Fired
☐ Other (explain)

Authority: 1965 PA 290
Completion: Mandatory
Penalty: None

The Department of Labor & Economic Growth will not discriminate against any individual or group because of race, sex, religion, age, national origin, color, marital status, disability, or political belief. If you need help with reading, writing, hearing, etc., under the Americans with Disabilities Act, you may make your needs known to this agency.

Mail original copy of accident report to the address listed above.

Boiler Information

BOILER LOCATION Pine Tech Inc				
ADDRESS 1560 W Houghton Crd		CITY Lake City	STATE MI	ZIP CODE 49721
OWNER NAME Same				
ADDRESS		CITY	STATE	ZIP CODE
BOILER CONSTRUCTION <input checked="" type="checkbox"/> WELD <input type="checkbox"/> RIVET <input type="checkbox"/> LAP <input type="checkbox"/> MECHANICAL ASSEMBLY		BOILER TYPE <input checked="" type="checkbox"/> FT <input checked="" type="checkbox"/> WT <input type="checkbox"/> CAST <input type="checkbox"/> OTHER Hybrid		
BOILER MANUFACTURER Group Simoneau				
STATE NUMBER 45237	MFG. SERIAL NUMBER	NATIONAL BOARD NUMBER 36	MAWP 15	YEAR BUILT 2006
SAFETY / RELIEF VALVE INSTALLED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		SET PRESSURE 15	ASME / NB STAMPED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	CAPACITY 31,640 lbs/hr
BOILER USED FOR <input type="checkbox"/> POWER <input checked="" type="checkbox"/> PROCESS <input type="checkbox"/> STEAM HEATING <input type="checkbox"/> HWH <input type="checkbox"/> HWS <input type="checkbox"/> OTHER (Specify)				
CSD-1 TESTING <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A		CSD-1 TEST LAST PERFORMED BY WHOM		BTU / HR INPUT
IS CERTIFICATE CURRENT <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO Not Yet fully installed			EXPIRATION DATE	
DOES JURISDICTION REQUIRE LICENSED OPERATOR <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			WERE OPERATORS LICENSED <input type="checkbox"/> YES <input type="checkbox"/> NO	
TYPE OF BUSINESS WHERE USED Lumber Drying Kilns		NUMBER KILLED 0	NUMBER INJURED 0	

Personal Injury

NAME OF PERSON INJURED NA	NAME OF PERSON INJURED
ADDRESS OF PERSON INJURED	ADDRESS OF PERSON INJURED
EXTENT OF INJURY	EXTENT OF INJURY
HOSPITALIZED <input type="checkbox"/> YES <input type="checkbox"/> NO	HOSPITALIZED <input type="checkbox"/> YES <input type="checkbox"/> NO

Witnesses Interviewed

NAME Stefan Lemay	ADDRESS 1560 W Houghton Crd	CITY Lake City	STATE MI	ZIP CODE 49721
NAME Jim Harrison	ADDRESS 602 W Seymour	CITY Chesham	STATE MI	ZIP CODE 49721
NAME Rejean Longpre	ADDRESS 405, rue Dessureault	CITY Trois-Rivieres	STATE	ZIP CODE G8T 2L8

Quebec

Accident

PROPERTY DAMAGE (Be specific. Include dollar amounts. Attach a separate page if necessary)

Upper portion of boiler, the fire tube part, experienced Dry fire - Upper hand hole gaskets were deformed & deteriorated by heat - tubes were leaking at the tube sheet joint

TYPE OF ACCIDENT (Explosion, Dry Fired, Rupture, etc.)

Dry Fire

DESCRIBE THE CAUSE AND EVENTS WHICH PRECEDED THE ACCIDENT. DESCRIBE IN DETAIL THE EXTENT AND PARTS DAMAGED

Condensate returns were mistakenly diverted to other boiler return/feed tank make up water float stuck. Boiler went low on water. Low water cut off float was out of adjustment and did not shut off burner. Boiler did shut

DAMAGE TO BOILER

down on high stack temp. But was reset multiple times

CAN BOILER BE REPAIRED

☒ YES ☐ NO

REPAIR PERMIT REQUIRED

☒ YES ☐ NO

WERE DAMAGED PARTS EXAMINED

☒ YES ☐ NO IF NO, WHY one tube was removed for testing See attached report

BASED ON YOUR INVESTIGATION, PLEASE PROVIDE YOUR OPINION OF THE CAUSE OF ACCIDENT

Operator error in diverting condensate return and stuck make up water float created the low water condition. Failure of the installer to provide CSO-1 testing allowed the Dry Fire

INSPECTOR'S RECOMMENDATION

Resetting by untrained operator allowed multiple Dry fire events
1) Install 2nd Low water cut off
2) Complete & Document CSO-1 testing
3) Train Operators

WHAT HAS BEEN DONE OR WILL BE DONE TO PREVENT RECURRENCE OF LIKE OR SIMILAR FAILURES

1) 2nd Low water cut off with lock out has been installed on boiler 2) Low water cut off with lock out has been installed on return/feed tank 3) CSO-1 Tests have been done 4) Operators will receive some training

Other Investigative Agencies

WERE OTHER INVESTIGATIVE AGENCIES INTERVIEWED		IS A REPORT AVAILABLE		WERE PHOTOGRAPHS TAKEN		ARE PHOTOGRAPHS ATTACHED TO REPORT	
<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES	<input type="checkbox"/> NO
NAME		ADDRESS		CITY		STATE ZIP CODE	
NAME		ADDRESS		CITY		STATE ZIP CODE	

Inspector

NAME OF INSPECTOR Daniel R. Kullin	LICENSE NUMBER 1044	DATE OF REPORT 12/28/07
---------------------------------------	------------------------	----------------------------

Bodycote TESTING GROUP

16360 MERRIFIELD DRIVE, DEARBORN MICHIGAN USA 48120 • TEL: (313) 271-8480 • FAX: (313) 271-4007

Attn: Dan Williams
Attn: Bill Valance
Boiler Division

Prepared For:

**Mr. Roger A. Schwartz
Schwartz Boiler Shop, Inc.
850 LaHale Road
Cheboygan, MI 49721**

**Test Report No.: 079597
Quote No.: Q 6849 msj
P.O. No.: Credit Card
Chemical & Mechanical Testing
On 2 Material Samples**

OK

Approved By:



**Rocco Rizzo
Laboratory Manager
Prepared By: LP**

Schwartz Boiler Shop, Inc.
Date: 01/05/07

Report # 079597
Page 1 of 4

THE RESULTS PRESENTED ABOVE RELATE ONLY TO THE ITEMS SUBMITTED FOR TESTING
THIS CERTIFICATE OR REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE APPROVAL OF THE LABORATORY.

Bodycote TESTING GROUP

16360 MERCANTILE DRIVE, DEARBORN MICHIGAN USA 48120 · TEL: (313) 271-8490 · FAX: (313) 271-4007

Table of Contents

Page Number	Description
1	Cover Page
2	Table of Contents
3	Description of Samples
3	Work Requested
3	Test Results
4	Test Results Continued

Schwartz Boiler Shop, Inc.
Date: 01/05/07Report # 079597
Page 2 of 4THE RESULTS PRESENTED ABOVE RELATE ONLY TO THE ITEMS SUBMITTED FOR TESTING
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Bodycote TESTING GROUP

15350 MERRIMANTLE DRIVE, BEARBORN MICHIGAN USA 48120 • TEL: (313) 271-8480 • FAX: (313) 271-4007

TEST REPORT

Schwartz Boiler Shop, Inc
850 LaHaie Road
Cheboygan, MI 49721

DATE: January 5, 2007
REPORT NO.: 079597
QUOTE NO.: Q6849 msj

Attn.: Mr. Roger A. Schwartz

P.O. NO.: Credit Card

DESCRIPTION OF SAMPLE

Two (2) samples identified as; SA-178 Grade A Boiler Tube.

WORK REQUESTED

Chemical & Mechanical Testing per ASTM A178/A 178M-02 on boiler tubes that were subjected to a low water overheating condition, to determine if they are still within specification limits.

- 1) Chemical Analysis, Sec 6.
- 2) Tensile (Tension), Sec 9.
- 3) Crush Test, Sec 10.
- 4) Flattening Test, Sec 11.1.
- 5) Flange Test, Sec 11.2.

TEST RESULTS

- 1) Chemical Analysis, Sec 6.

<u>Element</u>	<u>Result</u>	<u>% Composition</u>
Carbon	0.06	0.06 - 0.18
Manganese	0.49	0.27 - 0.63
Phosphorus, max	0.015	0.035
Sulfur, max	0.006	0.035
Silicon	0.029	--

Schwartz Boiler Shop, Inc.
Date: 01/05/07

Report # 079597
Page 3 of 4

THE RESULTS PRESENTED ABOVE RELATE ONLY TO THE ITEMS SUBMITTED FOR TESTING
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Bodycote

TEST RESULTS, CONTINUED

2) Tensile (Tension), Sec 9

<u>Sample</u>	<u>Tensile Strength (ksi)</u>	<u>Yield Strength (ksi)</u>	<u>% Elongation (in 2")</u>
1	48.5	36.2	42
Specification:	47 Min	26 Min	35 Min

3) Crush Test, Sec 10.

Result

Satisfactory

Specification: No cracks or imperfections

4) Flattening Test, Sec 11.1.

<u>Sample</u>	<u>First Step</u>	<u>Results</u>	<u>Second Step</u>
1	Satisfactory		Satisfactory
	No cracks or breaks		Evidence of laminated or unsound material, or incomplete weld revealed is cause for rejection.

5) Flange Test, Sec 11.2.

<u>Sample</u>	<u>Result</u>
1	Satisfactory

Specification: No cracks or imperfections.

Schwartz Boiler Shop, Inc.
Date: 01/05/07

Report # 079597
Page 4 of 4

THE RESULTS PRESENTED ABOVE RELATE ONLY TO THE ITEMS SUBMITTED FOR TESTING
THIS CERTIFICATE OR REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE APPROVAL OF THE LABORATORY.

Permit: RP036255 Address: 1560 W HOUGHTON LAKE ROAD-LAKE CITY 57
Status: CLOSED BLRINSTALL: HARRISON JAMES B
Date: 11/21/2006

Back Stop

Boiler Permit Information

Permit Type: Installation Permit
Boiler Use: Process Boiler
Construction Type: (1=Welded, 2=Rivited, 3=Lap, 4=Mech)
Owner Name: County: MISSAUKEE
Contractor License#: Class: Violation:
Contact Person: Phone:
Boiler Number:
Manufacturer: Permit Status:
Maximum Pressure: Applied:
Other #: Code: (1=NB,2=MFG) Issued:
Inspector Number: DANIEL R WILLIAMS Complete:
Insurer Number: STATE OF MICHIGAN
Business Nature: Permit Fee:
Specific Location: Additional Fees:
Boiler Type: (1=FT, 2=WT, 3=CI, 4=Other) Total All Fees:
LBS/BTU: MSVC: Payments Rcvd:
Balance Due:

Boiler: R415237 Address: 1560 W HOUGHTON LAKE ROAD-LAKE CITY 57
Status: ACTIVE OWNER: PINE TECH INC
Date: 02/14/2007

Back Stop ☐

First Inspection Information

First Inspection Date: Date Installed:
Boiler Use: Process Boiler
Other #: Code: (1=NB, 2=MFG)
Pressure Allowed: S V Pressure:
Insurer Number: STATE OF MICHIGAN
Inspector Number: DANIEL R WILLIAMS NB Commission Number
Owner Name:
Business Nature:
Specific Location: County: MISSAUKEE
Construction Type: (1=Wld, 2=Rvt, 3=Lap, 4=Mech) Boiler Type: (1=FT, 2=WT, 3=CI, 4=Other)
Manufacturer: Year Built:
Fuel Type: Method of Firing: Pressure Gage(Y/N):
Low Water Cutoff: With Manhole(Y/N):
Power Boiler Surface: Heat Surface: (1=Stamped, 2=Computed)
MRSVC Based On: (1=Stamp, 2=BTU, 3=Grate Area) LBS/BTU: Total LBS/BTU:
Max Design Steaming Cap: MRSVC: Total Cap SVC:
Permit #: Permit Type:
Contact Person: Phone:
Contractor License#: Class:

Boiler: R415237 Address: 1560 W HOUGHTON LAKE ROAD-LAKE CITY 57
Status: ACTIVE OWNER: PINE TECH INC
Date: 02/14/2007

Back Stop

Inspection Information

Current Inspection Information (Invoice/Certificate O=Own, L=Loc)

Date: 01/12/2007 Mail Code: 3 (1=O/L, 2=L/O, 3=O/O, 4=L/L)
Batch #: FIRST Boiler IAB: (I or Blank) Class: MC-3 Boiler Status: ACTIVE
Multiple: N Issue Invoice: Y Inspection Cycle: 1 Bill Ins:
Rule 27 - Test Procedure(Y/N/NA): N Int/Ext: 2 (1=Internal, 2=External)
LBS/BTU: B (L=LBS, B=BTU) Next Inspection Due: 01/12/2008
Total Cap SVC: 31,640 Rule 507 Inspection: / /
Inspector #: 301044 DANIEL R WILLIAMS Next Rule 507 Due: 2037
NB Commission Number: 0 S V Pressure: 15
Insurance Co #: 544 ZURICH INS CO Pressure Allowed: 15
Invoice#: BLR0607856 Max Design Steaming Cap: 29,578
MRSVC: 29,578
BTU/HR Input: 31,000,000

Inspection Information

Date	Rule 27	MC	IAB	I/E	L/B	Total Cap SVC	Insp #	Ins Co #	Invoice #	Batch #
/ /		0		0		0	0	0		
/ /		0		0		0	0	0		
/ /		0		0		0	0	0		
/ /		0		0		0	0	0		
/ /		0		0		0	0	0		

Permit: RP036979 Address: 1560 M 55 HIGHWAY-LAKE CITY 57
Status: CLOSED BLRREPAIR: SCHWARTZ ROGER A
Date: 01/25/2007 Back Stop

Boiler Permit Information

Permit Type:	REF	Repair Permit	Update	Exit	Ba
Boiler Use:	PROCESS	Process Boiler			
Construction Type:	1 (1=Welded, 2=Rivited, 3=Lap, 4=Mech)				
Owner Name:	PINE TECH		County:	57 MISSAUKEE	
Contractor License#:	320235	Class:	III	Violation:	
Contact Person:	STEPHAN LEMAY		Phone:	231 839-6880	
Boiler Number:	415237				
Manufacturer:			Permit Status:	CLOSED	
Maximum Pressure:	15		Applied:	01/25/2007	
Other #:		Code:	0 (1=NB, 2=MFG)	Issued:	/ /
Inspector Number:	301044	DANIEL R WILLIAMS		Complete:	01/26/2007
Insurer Number:	1	STATE OF MICHIGAN			
Business Nature:	SAWMILL		Permit Fee:	\$60.00	
Specific Location:			Additional Fees:	\$0.00	
Boiler Type:	1 (1=FT, 2=WT, 3=CI, 4=Other)		Total All Fees:	\$60.00	
LBS/BTU:		MSVC:	0	Payments Rcvd:	\$60.00
				Balance Due:	\$0.00

Accident Report - Boiler or Pressure Vessel
Michigan Department of Labor & Economic Growth
Bureau of Construction Codes & Fire Safety
Boiler Division
P.O. Box 30254, Lansing, MI 48909
(517) 241-9334

ACCIDENT DATE

10-10-2006

- ☐ Boiler Explosion
☐ Furnace Explosion
☒ Dry Fired
☐ Other (explain) _____

Authority: 1965 PA 290
Completion: Mandatory
Penalty: None

The Department of Labor & Economic Growth will not discriminate against any individual or group because of race, sex, religion, age, national origin, color, mental status, disability, or political belief. If you need help with reading, writing, hearing, etc., under the Americans with Disabilities Act, you may make your needs known to this agency.

Mail original copy of accident report to the address listed above.

Boiler Information

BOILER LOCATION KAISER ELEMENTARY SCHOOL				
ADDRESS 670 ONANDAGO ST.		CITY YPSILANTI	STATE MI	ZIP CODE 48198
OWNER NAME WILLOW RUN COMMUNITY SCHOOLS				
ADDRESS 145 SPENCER LN		CITY YPSILANTI	STATE MI	ZIP CODE 48198
BOILER CONSTRUCTION <input checked="" type="checkbox"/> WELD <input type="checkbox"/> RIVET <input type="checkbox"/> LAP <input type="checkbox"/> MECHANICAL ASSEMBLY		BOILER TYPE <input type="checkbox"/> FT <input checked="" type="checkbox"/> WT <input type="checkbox"/> CAST <input type="checkbox"/> OTHER		
BOILER MANUFACTURER UNILUX				
STATE NUMBER M 340347 M	MFG. SERIAL NUMBER 961	NATIONAL BOARD NUMBER 41	MAWP 2800# / HR	YEAR BUILT 1983
SAFETY / RELIEF VALVE INSTALLED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		SET PRESSURE 15 PSI	ASME / NB STAMPED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
BOILER USED FOR <input type="checkbox"/> POWER <input type="checkbox"/> PROCESS <input checked="" type="checkbox"/> STEAM HEATING <input type="checkbox"/> HWH <input type="checkbox"/> HWS <input type="checkbox"/> OTHER (Specify) _____				
CSD-1 TESTING <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A		CSD-1 TEST LAST PERFORMED BY WHOM		BTU / HR INPUT
IS CERTIFICATE CURRENT <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			EXPIRATION DATE 5-26-08	
DOES JURISDICTION REQUIRE LICENSED OPERATOR <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			WERE OPERATORS LICENSED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
TYPE OF BUSINESS WHERE USED SCHOOL		NUMBER KILLED 0	NUMBER INJURED 0	

Personal Injury

NAME OF PERSON INJURED	NAME OF PERSON INJURED
ADDRESS OF PERSON INJURED	ADDRESS OF PERSON INJURED
EXTENT OF INJURY	EXTENT OF INJURY
HOSPITALIZED <input type="checkbox"/> YES <input type="checkbox"/> NO	HOSPITALIZED <input type="checkbox"/> YES <input type="checkbox"/> NO

Witnesses Interviewed

NAME TODD LA PRAIRIE	ADDRESS SAME AS ABOVE	CITY ABOVE	STATE	ZIP CODE
NAME	ADDRESS	CITY	STATE	ZIP CODE
NAME	ADDRESS	CITY	STATE	ZIP CODE

RECEIVED

NOV 17 2006

BOILER DIVISION

Accident

PROPERTY DAMAGE (Be specific. Include dollar amounts. Attach a separate page if necessary)

BOILER DRY FIRED -- BEING REPLACED FOR
\$ 68,600.

TYPE OF ACCIDENT (Explosion, Dry Fired, Rupture, etc.)

DRY FIRED

DESCRIBE THE CAUSE AND EVENTS WHICH PRECEDED THE ACCIDENT. DESCRIBE IN DETAIL THE EXTENT AND PARTS DAMAGED.

BOILER IN NORMAL USE WHEN OPERATOR NOTED A SMELL
OF BURNING INSULATING MATERIAL. BOILER TUBES
SAGGED & BLUE, INNER CASING WARPED, EXHAUST
VENT CHARRED, STEAM DRUM BLUE IN COLOR

DAMAGE TO BOILER

SEE ABOVE

CAN BOILER BE REPAIRED

☐ YES ☒ NO
REPAIR PERMIT REQUIRED

☐ YES ☐ NO

WERE DAMAGED PARTS EXAMINED

☒ YES ☐ NO IF NO, WHY

BASED ON YOUR INVESTIGATION, PLEASE PROVIDE YOUR OPINION OF THE CAUSE OF ACCIDENT

POSSIBLE FIRE EYE CONTROL FAILURE. LWCO
WAS CLEAN, NO EVIDENCE OF BLOCKAGE IN
PIPING TO LWCO, NO SCALE EVIDENT.

INSPECTOR'S RECOMMENDATION

BOILER BEING REPLACED.

WHAT HAS BEEN DONE OR WILL BE DONE TO PREVENT RECURRENCE OF LIKE OR SIMILAR FAILURES

OPERATOR IS AWARE OF REQUIRED MAINTENANCE
& WAS PERFORMING SAME. NO RECOMMENDATIONS.

Other Investigative Agencies

WERE OTHER INVESTIGATIVE AGENCIES INTERVIEWED	IS A REPORT AVAILABLE	WERE PHOTOGRAPHS TAKEN	ARE PHOTOGRAPHS ATTACHED TO REPORT
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
NAME	ADDRESS	CITY	STATE ZIP CODE
NAME	ADDRESS	CITY	STATE ZIP CODE

Inspector

NAME OF INSPECTOR DENNIS DOBRANSKY	LICENSE NUMBER 300531	DATE OF REPORT 11-14-06
---------------------------------------	--------------------------	----------------------------

Boiler: R340347 Address: 670 ONONDAGA-YPSILANTI 81
Status: SCRAPPED OWNER: T LAPRAIRIE C/O WILLOW RUN
Date: 01/01/1983

Back Stop

First Inspection Information

First Inspection Date: / / Date Installed: 01/01/1983
Boiler Use: STEAM Steam Heating Boiler
Other #: 41 Code: 1 (1=NB, 2=MFG)
Pressure Allowed: 15 S V Pressure: 15
Insurer Number: 8082 HARTFORD STEAM BOILER
Inspector Number: 300840 LAWRENCE BLACK NB Commission Number 0
Owner Name: T LAPRAIRIE C/O WILLOW RUN
Business Nature: SCHOOL
Specific Location: BLR RM County: 81 WASHTENAW
Construction Type: 1 (1=Wld, 2=Rvt, 3=Lap, 4=Mech) Boiler Type: 2 (1=FT, 2=WT, 3=CI, 4=Other)
Manufacturer: UNILUX Year Built: 1983
Fuel Type: GAS Method of Firing: AUTO Pressure Gage(Y/N): Y
Low Water Cutoff: FLOAT With Manhole(Y/N): N
Power Boiler Surface: 257 Heat Surface: 1 (1=Stamped, 2=Computed)
MRSVC Based On: 1 (1=Stamp, 2=BTU, 3=Grate Area) LBS/BTU: L Total LBS/BTU: L
Max Design Steaming Cap: 2,800 MRSVC: 2,800 Total Cap SVC: 2,800
Permit #: Permit Type:
Contact Person: Phone:
Contractor License#: Class:

Boiler: R340347 Address: 670 ONONDAGA-YPSILANTI 81
Status: SCRAPPED OWNER: T LAPRAIRIE C/O WILLOW RUN
Date: 01/01/1983

Back Stop

Inspection Information

Current Inspection Information (Invoice/Certificate O=Own, L=Loc)
Date: 05/26/2006 Mail Code: 3 (1=O/L, 2=L/O, 3=O/O, 4=L/L)
Batch #: REINSP Boiler IAB: (I or Blank) Class: MC-3 Boiler Status: SCRAPPED
Multiple: N Issue Invoice: Y Inspection Cycle: 2 Bill Ins
Rule 27 - Test Procedure(Y/N/NA): Y
Int/Ext: 2 (1=Internal, 2=External)
LBS/BTU: L (L=LBS, B=BTU)
Total Cap SVC: 0
Inspector #: 300432 JOHN MAZIARZ
NB Commission Number: 0
Insurance Co #: 8082 HARTFORD STEAM BOILER
Invoice#: BLR0587661
Next Inspection Due: 05/25/2008
Rule 507 Inspection: / /
Next Rule 507 Due: 2013
S V Pressure: 15
Pressure Allowed: 15
Max Design Steaming Cap: 2,800
MRSVC: 2,800
BTU/HR Input: 2,940,000

Inspection Information

Date	Rule 27	MC	IAB	I/E	L/B	Total Cap SVC	Insp #	Ins Co #	Invoice #	Batch #
03/24/2004	Y	3		2	L	3,150	300432	8082	BLR0533672	R4125B
08/28/2001		3		1	L	2,800	300840	8082	BLR0445540	1257HA
09/01/1999		3		3	L	2,800	300752	8082	BLR0379432	9282H
07/17/1997		3		1	L	2,800	300318	8082		7192GD
/ /		0		0		0	0	0		

Permit:	RP035754	Address:	670 ONANDAGA-YPSILANTI 81
Status:	CLOSED	BLRINSTALL:	MITCHELL DAVID C
Date:	10/19/2006		

Back Stop

Boiler Permit Information

Permit Type:	INS	Installation Permit	Update		Exit	Back
Boiler Use:	HWH	Hot Water Heat				
Construction Type:	1	(1=Welded, 2=Rivited, 3=Lap, 4=Mech)				
Owner Name:	WILLOW RUN COMMUNITY SCHOOLS	County:	81	WASHTENAW		
Contractor License#:	313007	Class:	5B	Violation:		
Contact Person:	GENE DAY	Phone:	734 320-6973			
Boiler Number:	415162					
Manufacturer:	RIVERSIDE HYDRONICS	Permit Status:	CLOSED			
Maximum Pressure:	50	Applied:	10/19/2006			
Other #:	652	Code:	1	(1=NB,2=MFG)	Issued:	10/20/2006
Inspector Number:	301060	JOHN H PRAY	Complete:	08/22/2007		
Insurer Number:	1	STATE OF MICHIGAN				
Business Nature:		Permit Fee:	\$60.00			
Specific Location:		Additional Fees:	\$0.00			
Boiler Type:	4	(1=FT, 2=WT, 3=CI, 4=Other)	Total All Fees:	\$60.00		
LBS/BTU:	B	MSVC:	1,200,000	Payments Rcvd:	\$60.00	
				Balance Due:	\$0.00	

Permit: RP036197 Address: 670 ONANDAGA-YPSILANTI 81
Status: CLOSED BLRINSTALL: MITCHELL DAVID C
Date: 11/15/2006 Back Stop

Boiler Permit Information

Permit Type:	INS	Installation Permit	Update	Exit	Back
Boiler Use:	HWH	Hot Water Heat			
Construction Type:	1 (1=Welded, 2=Rivited, 3=Lap, 4=Mech)				
Owner Name:	WILLOW RUN COMMUNITY SCHOOLS		County:	81 WASHTENAW	
Contractor License#:	313007	Class:	5B	Violation:	
Contact Person:	GENE DAY		Phone:	734 320-6973	
Boiler Number:	415161				
Manufacturer:	RIVERSIDE HYDRONICS		Permit Status:	CLOSED	
Maximum Pressure:	50		Applied:	11/15/2006	
Other #:	500740	Code:	1 (1=NB,2=MFG)	Issued:	11/17/2006
Inspector Number:	301060	JOHN H PRAY		Complete:	08/22/2007
Insurer Number:	1	STATE OF MICHIGAN			
Business Nature:			Permit Fee:	\$60.00	
Specific Location:			Additional Fees:	\$0.00	
Boiler Type:	4 (1=FT, 2=WT, 3=CI, 4=Other)		Total All Fees:	\$60.00	
LBS/BTU:	B	MSVC:	1,600,000	Payments Rcvd:	\$60.00
				Balance Due:	\$0.00

Pray, John H (DLEG)

From: Vallance, Bill (DLEG)
Sent: Friday, November 17, 2006 4:31 PM
To: Pray, John H (DLEG)
Subject: FW: Kaiser Elementary Accident

John they dry fired the boiler at 670 onandago street in ypsi.

It was a unilux 1983 boiler #340347

Can you please find out my questions below as the low water cut off was clean so I am curious at to why the boiler dry fired???????????????? The boiler is going to be replaced.

I just need to info as I do have a accident report.

-----Original Message-----

From: Dennis_Dobransky@HSB.com [mailto:Dennis_Dobransky@HSB.com]
Sent: Friday, November 17, 2006 4:22 PM
To: Vallance, Bill (DLEG)
Subject: Re: Kaiser Elementary Accident

Bill,

Hello. I do not know the answer to your question. I was on site as an adjuster, and did not think to ask the insured questions regarding csd-1 testing.

Dennis

WILLOW RUN COMM, SCHOOLS
235 SPENCER LN
48198

HENRY J. KAISER ELEM SCH,

"Vallance, Bill (DLEG)" <bvalla@michigan.gov>

To <Dennis_Dobransky@HSB.com>

cc

Subject Kaiser Elementary Accident

11/17/2006 04:10 PM

Bill,

12/13/2006

THE CSD-1 TESTING WAS CONDUCTED BY GREAT LAKES POWER INC. LIC # 313007. I HAVE ASKED FOR A COPY OF THE LAST TESTING RESULTS BUT HAVE NOT TO DATE RECIEVED ANYTHING, THE SCHOOL DOES NOT APPEAR TO

On the accident form you failed to mention if the school had done any annual or periodic csd-1 testing. Did they and if so who did the last annual.

William Vallance, Assistant Chief

Boiler Division, Bureau of Construction Codes

P.O. Box 30254

Lansing MI 48909

517 241 9334 telephone

517 241 6301 facsimile

*Providing for Michigan's Safety in the Built Environment

HAVE ANY ROUTINE MAINT. PROGRAM IN PLACE
I TALKED TO THE SCHOOL MAINT. DIRECTOR, GENE DAY AT 734-320-6973 AND INSTRUCTED HIM ON REQUIRED ROUTINE TESTING & MAINT AS PER THE MANUFACTURERS REC. ON THE 2 NEW BOILERS INSTALLED TO REPLACE THE ONE THAT DRY FIRED.

12/09/2006

John Pray
11/20

GREAT LAKES POWER, INC.
30 W. LANTZ
DETROIT, MI 48203
(313) 366-5550
FAX (313) 366-8899

Facsimile Message Sheet

DATE 02/12/2007

PLEASE DELIVER THE FOLLOWING PAGE(S) TO:

NAME Mr. Vallance

COMPANY

FAX NUMBER (517) 241-6301

MESSAGE Requested CSD-1 report for Willow Run Schools

PAGES SENT INCLUDING COVER SHEET 3

FROM Dave Mitchell
Great Lakes Power, Inc.

IF PAGES ARE NOT LEGIBLE OR ALL PAGES HAVE NOT BEEN RECEIVED PLEASE PHONE (313) 366-5550.

10-28-2004
KAISER ELEM.

GREAT LAKES POWER

Field Start-up Report

Job Name & Location: WILLOW RUN COMM. SCHLS. / KAISER ELEM.Boiler Model: UNILUX-2505Factory Order No. 670 DNANDAGA ST.SER. # H3959 (N.B. #41) / MICH. # M3040474 / YPSILANTI MI 48198

	GAS			OIL		
	LOW	MID	HIGH	LOW	MID	HIGH
Fuel Input - Gas, CFH - Oil, GPH						
Firebox Pressure						
Stack Draft						
Outlet Damper - % Closed						
Air Intake Louvre, inches open						
Primary Air Adjustment, % Open						
Gas Manifold Pressure, inch water column	1.5"	3.2"	4"wc			
Gas Ring Pressure, inch water column						
Oil Nozzle Pressure, psi						
Percent Carbon Dioxide	6.0	8.0	9.5			
Oxygen	10.0	7.0	4.5			
Bacharach Smoke No.						
Inlet Air Temperature (Ambient)	80°	80°	80°			
Stack Temperature	260°	300°	320°			
Boiler Steam Pressure / Water Temperature	9#	10#	12#			
Combustion Efficiency, percent	80%	82%	83%			
Oil Pump Pressure, psig						
Oil Bypass Pressure, psig						
Atomizing Air Pressure, psig						

Signed:

Boiler Service Technician

Date:

10-28-2004

Accepted by:

Owner's Representative

10-28-2004
KAISER ELEM

GREAT LAKES POWER

ASME CSD-1 TEST REPORT

Customer Name: WILLOW RUN COMM. SCHLS. / KAISER ELEMENTARY
 Address: 670 DNANDAGA ST.
 City: YPSILANTI State: MI Zip Code: 48198
 Contact: GENE DAY Phone No.: 734) 320-6973
 Boiler Manufacturer: UNILUX MANF. CO. Model No.: 250 S
 Burner Manufacturer: INDUSTRIAL COMB. Model No.: FPG L-28
 Boiler Serial No.: H3959 State/City No.: M 304047 M

BOILER SAFETY CHECK LIST

CONTROL OR DEVICE	GOOD	BAD	N/A	SET POINT	CONTROL OR DEVICE	GOOD	BAD	N/A	SET POINT
SAFETY VALVES	✓			15 #	FLUE-PROTECT THERMIST	✓			60 SEC
HIGH LOW WATER CUT-OFF	✓			2"	IGNITION TIGHTING	✓			10 SEC
LOW WATER ALARM			✓		PILOT FLAME SIGNAL	✓			12
HIGH WATER ALARM			✓		MAIN FLAME SIGNAL	✓			20
PUMP ON	✓			3"	PILOT FLAME OUT (response time)	✓			3 SEC
PUMP OFF	✓			4"	MAIN FLAME OUT (response time)	✓			3 SEC
ROX. LOW WATER CUT-OFF	✓			10"	GAS PRESSURE (normal)	✓			4" w.c.
OPERATING PRESS-TEMP	✓			11 #	BLUETHER STARTER CONTACT	✓			
MODULATING CONTROL	✓			6 #	OL VALVES	✓			
RED LIGHT CONTROL	✓			13 #	W/L VALVE PROOF OF CLAMPTING	✓			
LOW FUEL HOLD	✓		✓		LOW OIL PRESSURE	✓			
COMBUSTION AIR FLOWING	✓			12" w.c.	HIGH OIL PRESSURE	✓			
WATER RETURN WATERFLOW	✓				LOW OIL TEMP	✓			
PILOT GAS VALVE	✓				HIGH OIL TEMP	✓			
WATER GAS VALVE, spring test	✓				LOW ATOM AIR PRESS	✓			
GAS VALV PROOF OF CLAMPTING	✓			13 SEC	HIGH ATOM TEMP SWITCH	✓			
LOW GAS PRESS SWITCH	✓			2" w.c.	GAS TRAIL LEAK CHECKED	✓			
HIGH GAS PRESS SWITCH	✓			5" w.c.	OL TRAIL LEAK CHECKED	✓			
LOW FUEL FLOWING SWITCH	✓			98% CLOS	WIRING & CONNECTIONS	✓			
HIGH FUEL FLOWING SWITCH	✓			15% OPEN	FUEL & AIR TITRAGES	✓			

COMMENTS: ALL CONTROLS AND SAFETY DEVICES FUNCTIONING
PROPERLY AT THIS TIME

See separate field service report for combustion analysis

SERVICE TECHNICIAN

Spencer E. Moorefield

DATE 10-28-2004

ACCEPTED BY

DATE

Boiler:: R415161

Address: 670 ONANDAGA STREET-YPSILANTI 81

Status: ACTIVE

OWNER: WILLOW RUN COMMUNITY SCHOOLS

Date: 02/02/2007

Back Stop ☐

First Inspection Information

First Inspection Date: 2/13/2006

Date Installed: 01/01/2006

Boiler Use: HWH Hot Water Heat

Other #: 740 Code: 1 (1=NB, 2=MFG)

Pressure Allowed: 125 S V Pressure: 50

Insurer Number: 8082 HARTFORD STEAM BOILER

Inspector Number: 301060 JOHN H PRAY NB Commission Number 10877

Owner Name: WILLOW RUN COMMUNITY SCHOOLS

Business Nature: SCHOOL

Specific Location: BOILER ROOM

County: 81 WASHTENAW

Construction Type: 1 (1=Wld, 2=Rvt, 3=Lap, 4=Mech)

Boiler Type: 2 (1=FT, 2=WT, 3=Cl, 4=Other)

Manufacturer: RIVERSIDE HYDRONICS

Year Built: 2006

Fuel Type: GAS Method of Firing: AUTO

Pressure Gage(Y/N): Y

Low Water Cutoff: FLOW SWITCH With Manhole(Y/N): N

Power Boiler Surface: 0 Heat Surface: (1=Stamped, 2=Computed)

MRSVC Based On: 1 (1=Stamp, 2=BTU, 3=Grate Area)

LBS/BTU: B

Total LBS/BTU: B

Max Design Steaming Cap: 1,344,000

MRSVC: 1,344,000

Total Cap SVC: 1,899,000

Permit #: 36197

Permit Type: INS

Contact Person:

Phone:

Contractor License#: 313007

Class:

Boiler #: R415162 Address: 670 ONANDAGA STREET-YPSILANTI 81

Status: ACTIVE

OWNER: WILLOW RUN COMMUNITY SCHOOLS

Date: 02/02/2007

Back Stop ☐

First Inspection Information

First Inspection Date: 2/13/2006

Date Installed: 01/01/2006

Boiler Use: HWH Hot Water Heat

Other #: 652 Code: 1 (1=NB, 2=MFG)

Pressure Allowed: 125 S V Pressure: 50

Insurer Number: 8082 HARTFORD STEAM BOILER

Inspector Number: 301060 JOHN H PRAY NB Commission Number 10877

Owner Name: WILLOW RUN COMMUNITY SCHOOLS

Business Nature: SCHOOL

Specific Location: BOILER ROOM

County: 81 WASHTENAW

Construction Type: 1 (1=Wld, 2=Rvt, 3=Lap, 4=Mech)

Boiler Type: 2 (1=FT, 2=WT, 3=CI, 4=Other)

Manufacturer: RIVERSIDE HYDRONICS

Year Built: 2006

Fuel Type: GAS

Method of Firing: AUTO

Pressure Gage(Y/N): Y

Low Water Cutoff: FLOW SWITCH

With Manhole(Y/N): N

Power Boiler Surface: 0 Heat Surface: (1=Stamped, 2=Computed)

MRSVC Based On: 1 (1=Stamp, 2=BTU, 3=Grate Area)

LBS/BTU: B

Total LBS/BTU: B

Max Design Steaming Cap: 1,008,000

MRSVC: 1,008,000

Total Cap SVC: 1,952,000

Permit #: 35754

Permit Type: INS

Contact Person:

Phone:

Contractor License#: 313007

Class:

Accident Report - Boiler or Pressure Vessel

Michigan Department of Labor & Economic Growth

Bureau of Construction Codes & Fire Safety

Boiler Division

P.O. Box 30254, Lansing, MI 48909

(517) 241-9334

ACCIDENT DATE

12-17-2006

- ☐ Boiler Explosion
☐ Furnace Explosion
☒ Dry Fired
☐ Other (explain)

Authority: 1965 PA 290
Completion: Mandatory
Penalty: None

The Department of Labor & Economic Growth will not discriminate against any individual or group because of race, sex, religion, age, national origin, color, marital status, disability, or political belief. If you need help with reading, writing, hearing, etc., under the Americans with Disabilities Act, you may make your needs known to this agency.

Mail original copy of accident report to the address listed above.

Boiler Information

BOILER LOCATION Muskegon Christian Elementary School				
ADDRESS 1220 Eastgate		CITY Muskegon	STATE MI	ZIP CODE 49442
OWNER NAME Muskegon Christian Elementary				
ADDRESS 1220 Eastgate		CITY Muskegon	STATE MI	ZIP CODE 49442
BOILER CONSTRUCTION <input type="checkbox"/> WELD <input type="checkbox"/> RIVET <input type="checkbox"/> LAP <input checked="" type="checkbox"/> MECHANICAL ASSEMBLY			BOILER TYPE <input type="checkbox"/> FT <input type="checkbox"/> WT <input checked="" type="checkbox"/> CAST <input type="checkbox"/> OTHER	
BOILER MANUFACTURER Utica				
STATE NUMBER M 357270 M	MFG. SERIAL NUMBER —	NATIONAL BOARD NUMBER —	MAWP 15	YEAR BUILT 1989
SAFETY / RELIEF VALVE INSTALLED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	SET PRESSURE 15	ASME / NB STAMPED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	CAPACITY 1200 PPH	
BOILER USED FOR <input type="checkbox"/> POWER <input type="checkbox"/> PROCESS <input checked="" type="checkbox"/> STEAM HEATING <input type="checkbox"/> HWH <input type="checkbox"/> HWS <input type="checkbox"/> OTHER (Specify)				
CSD-1 TESTING <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A	CSD-1 TEST LAST PERFORMED 9-27-05	BY WHOM Tim Seidel Laseko	BTU / HR INPUT 1,200,000	
IS CERTIFICATE CURRENT <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			EXPIRATION DATE 2-28-2007	
DOES JURISDICTION REQUIRE LICENSED OPERATOR <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			WERE OPERATORS LICENSED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
TYPE OF BUSINESS WHERE USED School (Elementary)		NUMBER KILLED 0	NUMBER INJURED 0	

Personal Injury

NAME OF PERSON INJURED	NAME OF PERSON INJURED
ADDRESS OF PERSON INJURED	ADDRESS OF PERSON INJURED
EXTENT OF INJURY	EXTENT OF INJURY
HOSPITALIZED <input type="checkbox"/> YES <input type="checkbox"/> NO	HOSPITALIZED <input type="checkbox"/> YES <input type="checkbox"/> NO

Witnesses Interviewed

NAME Chris Hunsburger	ADDRESS 2150 E Laketon	CITY Muskegon	STATE MI	ZIP CODE 49442
NAME George Bazuin (assist. admin)	ADDRESS 1220 Eastgate	CITY Muskegon	STATE MI	ZIP CODE 49442
NAME Tim Seidel	ADDRESS Laseko	CITY Muskegon	STATE MI	ZIP CODE 49442

Accident

PROPERTY DAMAGE (Be specific. Include dollar amounts. Attach a separate page if necessary)

No additional damage other than the boiler
Boiler replacement cost = \$

TYPE OF ACCIDENT (Explosion, Dry Fired, Rupture, etc.)

Boiler Dry Fired

DESCRIBE THE CAUSE AND EVENTS WHICH PRECEDED THE ACCIDENT. DESCRIBE IN DETAIL THE EXTENT AND PARTS DAMAGED.

Low water fuel cutoff (primary) head was corroded then electrical head (shorted) crossed wires mostly plugged. Remaining piping and sections were observed at the scrap yard. Heavy build up in bottom of sections. Secondary low water Clean but connections were plugged on steam side.

DAMAGE TO BOILER

all sections damaged - 8 of 13 visible cracks

CAN BOILER BE REPAIRED

☐ YES ☒ NO

REPAIR PERMIT REQUIRED

☐ YES ☐ NO

WERE DAMAGED PARTS EXAMINED

☒ YES ☐ NO IF NO, WHY

BASED ON YOUR INVESTIGATION, PLEASE PROVIDE YOUR OPINION OF THE CAUSE OF ACCIDENT

Lack of maintenance. One bank of burners were shut down due to a leak. Lastco disabled bank and allowed boiler to run. Was probably filling with sediment at a fast rate after that.

INSPECTOR'S RECOMMENDATION

See attached

Train operator, add water meter after solving condensate loss. Require better inspection.

WHAT HAS BEEN DONE OR WILL BE DONE TO PREVENT RECURRENCE OF LIKE OR SIMILAR FAILURES

Boiler has been installed per CSD-1 rules and new laws will require annual maintenance per manufacturers guidelines. Water meter will be added to monitor fresh water make up.

Other Investigative Agencies

WERE OTHER INVESTIGATIVE AGENCIES INTERVIEWED

☐ YES ☒ NO

IS A REPORT AVAILABLE

☐ YES ☐ NO

WERE PHOTOGRAPHS TAKEN

☒ YES ☐ NO

ARE PHOTOGRAPHS ATTACHED TO REPORT

☒ YES ☐ NO

NAME

ADDRESS

CITY

STATE ZIP CODE

NAME

ADDRESS

CITY

STATE ZIP CODE

Inspector

NAME OF INSPECTOR

LICENSE NUMBER

DATE OF REPORT

James A. [Signature]

1072/12999 NBC

1-08-2007

Boiler:: R357270 Address: 1220 EASTGATE-MUSKEGON 61
Status: SCRAPPED OWNER: MUSKEGON CHRIST ELEMENTARY SCHOOLS
Date: 01/01/1989

Back Stop ☐

First Inspection Information

Inspection Date: / / Date Installed: 01/01/1989
Boiler Use: STEAM Steam Heating Boiler
Other #: 00990 Code: 2 (1=NB, 2=MFG)
Pressure Allowed: 15 S V Pressure: 15
Insurer Number: 8082 HARTFORD STEAM BOILER
Inspector Number: 300966 THOMAS SCHMIDT NB Commission Number 0
Owner Name: MUSKEGON CHRIST ELEMENTARY SCHI
Business Nature: SCHOOL
Specific Location: County: 61 MUSKEGON
Construction Type: (1=Wld, 2=Rvt, 3=Lap, 4=Mech) Boiler Type: 3 (1=FT, 2=WT, 3=CI, 4=Other)
Manufacturer: UTICA Year Built: 1989
Fuel Type: GAS Method of Firing: AUTO Pressure Gage(Y/N): Y
Low Water Cutoff: FLOAT With Manhole(Y/N): N
Power Boiler Surface: 0 Heat Surface: (1=Stamped, 2=Computed)
MRSVC Based On: 1 (1=Stamp, 2=BTU, 3=Grate Area) LBS/BTU: L Total LBS/BTU: L
Max Design Steaming Cap: 960 MRSVC: 960 Total Cap SVC: 1,200
Permit #: Permit Type:
Contact Person: Phone:
Contractor License#: Class:

Boiler:: R357270 Address: 1220 EASTGATE-MUSKEGON 61
Status: SCRAPPED OWNER: MUSKEGON CHRIST ELEMENTARY SCHOOLS
Date: 01/01/1989

Back Stop ☐

Inspection Information

Current Inspection Information (Invoice/Certificate O=Own, L=Loc)
Date: 02/28/2005 Mail Code: 3 (1=O/L, 2=L/O, 3=O/O, 4=L/L)
Batch #: R05146 Boiler IAB: (I or Blank) Class: MC-3 Boiler Status: SCRAPPED
Multiple: N Issue Invoice: Y Inspection Cycle: 2 Bill Ins:
Rule 27 - Test Procedure(Y/N/NA): Y Next Inspection Due: 02/28/2007
Int/Ext: 2 (1=Internal, 2=External) Rule 507 Inspection: / /
LBS/BTU: L (L=LBS, B=BTU) Next Rule 507 Due: 2019
Total Cap SVC: 0
Inspector #: 300966 THOMAS SCHMIDT
NB Commission Number: 0
Insurance Co #: 497 ST PAUL TRAVELERS
Invoice#: BLR0564278
S V Pressure: 15
Pressure Allowed: 15
Max Design Steaming Cap: 960
MRSVC: 960
BTU/HR Input: 1,200,000

Inspection Information

Date	Rule 27	MC	IAB	I/E	L/B	Total Cap SVC	Insp #	Ins Co #	Invoice #	Batch #
03/11/2003	Y	3		2	L	1,200	300966	8082	BLR0499080	R3105B
10/11/2001	Y	3		2	L	1,200	300966	8082	BLR0451598	1318HC
01/19/1999		1		3	L	1,200	300966	8082		9047HA
<input type="text"/> / <input type="text"/> / <input type="text"/>		0		0		0	0	0		
<input type="text"/> / <input type="text"/> / <input type="text"/>		0		0		0	0	0		

Permit:	RP036783	Address:	1220 EASTGATE-MUSKEGON 61
Status:	CLOSED	BLRINSTALL:	HORNAK MARTIN J
Date:	01/17/2007		

Back Stop

Boiler Permit Information

Permit Type:	INS	Installation Permit	Update		Exit	Ba
Boiler Use:	STEAM	Steam Heating Boiler				
Construction Type:	0	(1=Welded, 2=Rivited, 3=Lap, 4=Mech)				
Owner Name:	MUSKEGON CHRISTIAN ELEMENTARY	County:	61	MUSKEGON		
Contractor License#:	312523	Class:	2B	Violation:		
Contact Person:		Phone:				
Boiler Number:	419218					
Manufacturer:	UTICA	Permit Status:	CLOSED			
Maximum Pressure:	15	Applied:	01/17/2007			
Other #:		Code:	0	(1=NB,2=MFG)	Issued:	01/19/2007
Inspector Number:	301072	JAMES HUFNAGEL	Complete:	03/07/2007		
Insurer Number:	1	STATE OF MICHIGAN				
Business Nature:	SCHOOL	Permit Fee:		\$60.00		
Specific Location:		Additional Fees:		\$0.00		
Boiler Type:	3	(1=FT, 2=WT, 3=CI, 4=Other)	Total All Fees:		\$60.00	
LBS/BTU:	L	MSVC:	960	Payments Rcvd:		\$60.00
				Balance Due:		\$0.00

Boiler#: R419218 Address: 1220 EASTGATE-MUSKEGON 61
Status: ACTIVE OWNER: MUSKEGON CHRISTIAN ELEMENTARY
Date: 03/08/2007 Back Stop ☐

First Inspection Information

First Inspection Date: 02/13/2007 Date Installed: 03/08/2007
Boiler Use: STEAM
Other #: AF00990 Code: 2
Pressure Allowed: 15 S V Pressure: 15
Insurer Number: 1 STATE OF MICHIGAN
Inspector Number: 301072 JAMES HUFNAGEL NB Commission Number 12999
Owner Name: MUSKEGON CHRISTIAN ELEMENTARY
Business Nature: SCHOOL
Specific Location: BLRM County: 61 MUSKEGON
Construction Type: 4 Boiler Type: 3
Manufacturer: UTICA Year Built: 2006
Fuel Type: GAS
Low Water Cutoff: FLOAT
Power Boiler Surface: 0 Heat Surface:
MRSVC Based On: 1 LBS/BTU: L
Max Design Steaming Cap: 960 MRSVC: 960 Total Cap SVC: 1,200
Permit #: 036783 Permit Type: INS
Contact Person:
Contractor License#: 312523 Class: 2B



STATE OF MICHIGAN

DEPARTMENT OF LABOR & ECONOMIC GROWTH
LANSING

JENNIFER M. GRANHOLM
GOVERNOR

Robert W. Swanson
DIRECTOR

1/08/2007

DLEG/BCCFS
Boiler Division
Attention: Robert Aben; Bill Vallance

Reference: Muskegon Christian Elementary School
1220 Eastgate Ave.
Muskegon, Michigan 49442
Michigan Boiler #R357270, Mfg Utica, installed new 1989
Cast Iron sectional boiler 13 sections total

Dear Sirs,

The following is a detailed report of the accident investigation conducted 1/05/2007 and 1/08/2007.

Michigan Boiler number R357270 is a steam boiler used for low pressure steam heating. The boiler was installed in 1989. The system was maintained by a custodian that took care of the boiler log and monthly testing. Lascko Plumbing and Mechanical performed the licensed mechanical repairs (mechanical contractors license) and maintenance during the last two years. In review of the periodic logs and interviewing witnesses listed in the accident investigation report it is my finding that the boiler was dry fired between 12-15-2006 and 12-18-2006.

As you will see from the picture below the lower half of the cast iron sections were severely overheated and 8 of the 13 sections had cracks.



The lower openings of sections were found mostly plugged with caked sediment. One problem with the investigation was that the boiler was already disassembled and at the scrap yard where a lot of the sediment was already knocked out. The boiler had two float type low water fuel cutoffs. Connections between the low water cutoff and the boiler water connection on each low water cutoff were mostly plugged with sediment in the bowl and the water column piping. The secondary low water cutoff (McDonnell Miller model 67) was clean inside the float chamber but the upper steam connection between the boiler and the low water cutoff was completely plugged. The primary low water cutoff (McDonnell Miller model 150) was leaking from the bellows into the electrical enclosure causing loss of movement at the bellows from corrosion and shorting of the electrical circuits.

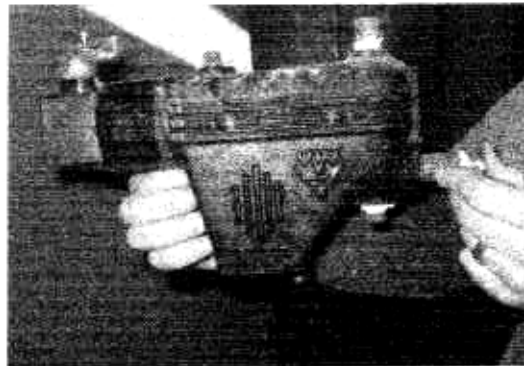
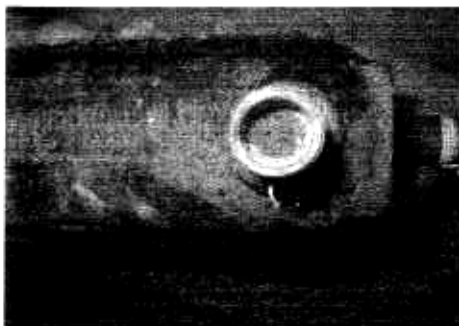
Providing for Michigan's Safety in the Built Environment

BUREAU OF CONSTRUCTION CODES & FIRE SAFETY
BOILER DIVISION
P.O. BOX 30254 • LANSING, MICHIGAN 48909
www.michigan.gov/dleg

Upon reviewing the periodic boiler check logs September 2005 thru March 2006 (see doc #2 attached) it was noted that in September of 2005 Lascko Plumbing noted on the log that the low water cutoffs were working and clean. Lascko Plumbing also included on 9-27-2005 the last CSD-1 report and also the last float inspection on our State form 518 with the same date (9/27/2005). The very next month on the periodic boiler check log from the custodian was that the primary low water cutoff was not working. In the interview the custodian stated that she had to open the electrical cover on the McDonnell 150 (primary and pump control) and vacuum it out and make sure the mercury switch made by moving it. This is not surprising considering the next picture of the inside of the McDonnell 150.

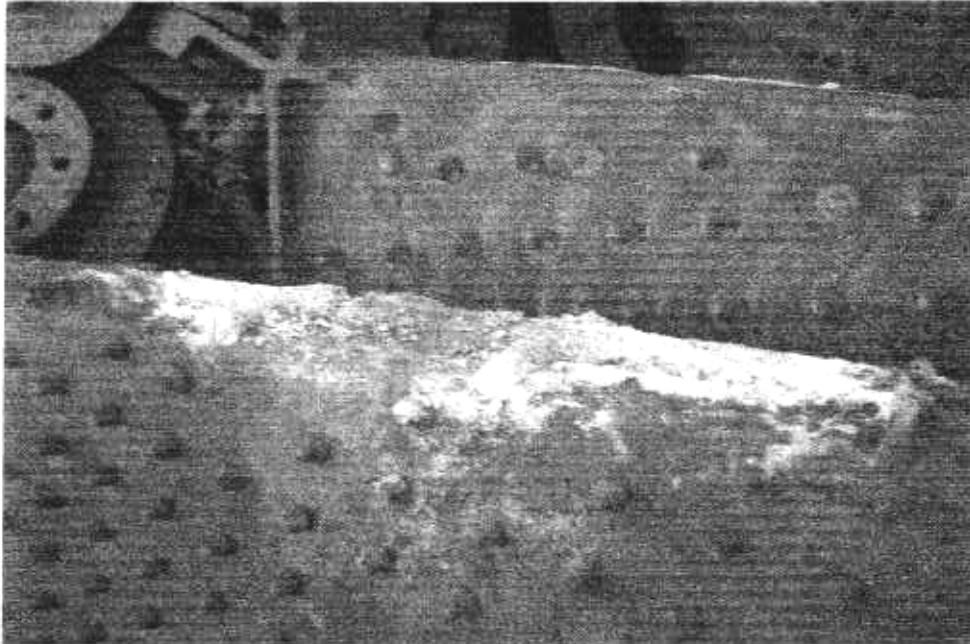


As you can see it is severely corroded and has been leaking for some time. This could have caused the burner to continue to run and the pump not to come on by tripping the breaker on the pump and shorting the burner circuit to remain on. The control and pump circuit are on separate breakers. With this control inoperative the secondary low water fuel cutoff was in question. As you can see from the next picture the upper steam connection between the secondary low water fuel cutoff McDonnell Miller #67 and the boiler was plugged.



Also from the periodic boiler log (doc 2) for the months of Jan, Feb and March 2006 the testing is crossed out and comments "call, fixed and back to full" being inserted in the comments area. I suspect that the custodian had many problems after 10/06/2006 because of the attached service report dated 10/06/2006 from Lascko Plumbing. (See doc 6). It reads "Low water cutoff had a air bubble in it, bled off, unit fired up". This air lock clearly indicated that the upper steam connection between the secondary low water cutoff (McDonnell Miller model 67) and boiler was plugged and causing false water levels at that date of 10/06/2006.

This was not the first indication of the boiler being dry fired. On document #1 dated 11/07/2005 Lascko Plumbing disabled one section of burners (three total, 400,000 BTU per section) as that part of the boiler had a leaking section. The service report reads "Boiler 1 of 3 has a crack in the heat exchanger and heavily leaks when cooled off". This appears to be a boiler with three modules as it has three sections of burners but it is one continuous boiler assembly of 13 sections. The statement boiler 1 of 3 is a misstatement as this is one burner with modular burner sections. The custodian stated that the technician disabled the first bank of burners as the boiler was leaking into the burners and causing flame problems. The section in the next picture is the one that was leaking on 11/07/2005 as it is the only one that has signs of sediment buildup on the outside of the section due to leaking for an extended time.



I believe the boiler was dry fired shortly after the CSD-1 test in September 2005 from the information gathered and noted above. Per the service report (11/07/2005 doc 1) the system was leaking and once the system was consistently losing water with fresh water introduced from the city there would have been a rapid build up of sediment in the sections, piping and water level controls. In addition to the leaking section a condensate tank was installed that was smaller than original. Due to the change in volume of this smaller tank; the system heat cycling and condensate return causes overflow of the tank to the drain and a large loss of condensate. This was and is now causing a considerable loss of condensate adding to a rapid sediment buildup due to the constant replenishment with city water and the condensate going to the drain.

By reviewing the inspection reports it appears that Richard Waltman (Travelers Insurance) was the last to inspect the boiler in the summer of 2005 and had requested an internal inspection with controls and safety device testing. The account is now under Hartford insurance and there were no records available at the school from Hartford. The remaining pictures are attached for your review.

Plugged piping on the primary low water cutoff.



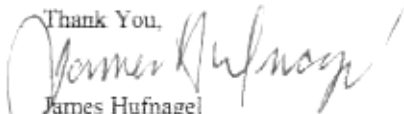
Partially plugged McDonnell Miller 150 bowl.



Sections already disassembled and at the scrap yard.



If you need any other information in this report please let me know.

Thank You,

James Hufnagel
Deputy Inspector
State of Michigan

LASCKO PLUMBING & MECHANICAL

Doc #1

"Daily Service Report"

Project Underground water clean.

Job Number _____

Date 11-2-05 Job Description Water. Under water & testing

Job Phone # _____

Customer P.O. # _____

NAME	STR.	OT	RATE	QTY.	MATERIALS	UNIT COST	TOTAL
1st Sidel	7.0			4	Underwater check and		
TRAINING S.	6.5						
				1	Underwater		
					7-2015-3 and		
					VERTICAL 2 HOLE.		
				1	Underwater	NRG	
					7-2015-3		
					4 HOLE		
				1	NO 132	NRG	
					Under VAL 75 PS.G		
Under #1 in a T				4	30' hole 70'		
OF 3 HAS A BACK				4	30' hole 70'		
IAL H+EVUANGER.				2	30' hole 57 90		
AND LEAKS WHEN				4	30' hole 80 90	NRG	
COOLED EFF.				4	30' hole 80 90	NRG	
				4	30' hole 80 90	NRG	
				4	30' hole 80 90	NRG	
TEST SYSTEM FOR A WHILE CHECK COORDINATE FOR STAIRING							
OR LISA FOR WARMING OR RANGING							

TOTAL HOURS: STR _____ T/H _____ DBL _____

TOTAL MATERIALS: _____

TOTAL EQUIP/TRUCK RENTAL: _____

AUTHORIZED

SIGNATURE: _____

TOTAL LABOR: _____

OTHER: _____

TECHNICIAN: _____

TOTAL AMOUNT DUE _____

Doc #2

Low Pressure Steam Boiler Log Suggested Outline for Compliance to CSD-1 Requirements Boiler Log for Low Pressure Steam Heating Systems (* Signifies Rule 27/CSD-1 Required Testing)

	Check Boiler Water Level in Sight glass (See Note *1)	Check Boiler Pressure On Gauge (See Note *2)	*Drain /Test Low Water Fuel Cut-Out (See Note *3)	*Manually/Hand Test Boiler Safety/Relief Valve (*4)	Check/Observe Burner Operation (See Note *5)	Comments Or Observations
Jan	1/6 open lower	X	X	Call plumber	X	Call
Feb		X	X	X	X	Plumber
Mar	1/8	X	X	X	X	Boiler to run
Apr		shut-down				
May						
Jun			for			
Jul				Summer		
Aug		2005?				
Sep	Yes	Yes 2.5	Clean & working	Yes	Yes good	CRScho plumbing / Meaf
27th		Yes .5	yes not working	Yes	yes good	Tim Seidel /
Oct	Yes	yes. 1		yes	yes good	K.B.
Nov	Yes	Yes	Yes	Yes	X good X	K.B. X
Dec	Yes	Yes	Yes	Yes	Yes	Water level High

- Note *1:** ***Always be sure there is a water level visible in the Boiler's sight glass before any further testing.
- Note *2:** Normal boiler/system pressures varies with each steam system/building application (from 0 to 12 psi).
- Note *3:** Either a LWCO Column Drain or Slow Drain Test is acceptable for compliance to Rule 27/CSD-1.
- Note *4:** When testing boiler safety/relief valves Use Caution-Steam Temperatures can be up to 220-250 F.
- Note *5:** Some burner configurations have a Pre-Purge/Pilot/Main Flame/Post Purge Cycle(s).

*****Always Use Caution When Operating Boiler Safety Devices and Controls*****



JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LABOR & ECONOMIC GROWTH
LANSING

DAVID C. HOLLISTER
DIRECTOR

Rule 518 (R-408.4518)/Low Water Cut-off Inspection
R408.4518 Inspection of Low Water Cutoffs

Rule 518 requires that the owner shall ensure that an inspection of the low water cutoff is performed at least once during the certificate period, preferably at the time of the certificate inspection.

Float model, low water fuel cutoffs are to be disassembled and cleaned to allow an inspection of the float and float chamber. After reassembly an operational test of low water cut off is required.

Probe and flow switch model low water fuel cutoffs, shall be removed from the boiler or its associated piping for inspection. After reassembly an operational test of low water cut off is required. An acceptable alternative test, acceptable to the inspector, allows the owner to ensure a test performed for operability by lowering the water level or stopping flow to actuate the low water cutoff and secure the boiler.

(Maintain documentation of this low water cutoff inspection at the boiler location!)

Explanation: This rule requires inspection of all types of low water fuel cutoffs. How often the low water cutoff has to be inspected is determined by the inspection frequency of your boiler. The low water fuel out offs shall be inspected at least once during your inspection certificate date range. The range is from the date inspected to the date due. If there are, more than one low water fuel cutoffs on a boiler each shall be inspected.

Suggested Outline of recording inspection of Low Water Fuel Cutoffs

Date of Inspection (01/01/2003-etc.)	Type of Cutoff (Float, Flow Switch, Probe)	Method of Inspection (#1, #2, #3)	Results of Inspection (Acceptable/Unacceptable)	Comments
9.27.05	(2) FLOAT	#1	ACCEPTABLE	LASCO Plumb & Melt. TIM SEIDEN

Methods for Inspection-All Type(s) of Low Water Fuel Cutoffs

- Method #1. Float type Low Water Cutoff disassembled, cleaned, float and float chamber inspected.
- Method #2. Probe or Flow Switch type Low Water Cutoff removed from piping for inspection.
- Method #3. Probe or Flow Switch type Low Water Cutoff alternative test.

Providing for Michigan's Safety in the Built Environment

BUREAU OF CONSTRUCTION CODES & FIRE SAFETY
P.O. BOX 30222 • LANSING, MICHIGAN 48909
Phone (517) 241-9347 • Fax (517) 241-6371
www.michigan.gov

Doc #4

Low Pressure Steam Boiler Log Suggested Outline for Compliance to CSD-1 Requirements Boiler Log for Low Pressure Steam Heating Systems (* Signifies Rule 27/CSD-1 Required Testing)

Check Boiler Water Level in Sight glass (See Note *1)	Check Boiler Pressure On Gauge (See Note *2)	*Drain /Test Low Water Fuel Cut-Out (See Note *3)	*Manually/Hand Test Boiler Safety/Relief Valve (*4)	Check/Observe Burner Operation (See Note *5)	Comments Or Observations
--	---	--	--	---	--------------------------------

Jan					
Feb					
Mar					
Apr					
May					
Jun					
Jul					
Aug					
Sep	2006	Resumed			
Oct	Start- UP	KB 2.5	KB OK	KB OK	KB OK
Nov	13	KB 2.5	KB OK	KB OK	KB OK
Dec					

water level running high
water level lower & water cleaner

Note *1: ***Always be sure there is a water level visible in the Boiler=s sight glass before any further testing.
Note *2: Normal boiler/system pressures varies with each steam system/building application (from 0 to 12 psi).
Note *3: Either a LWCO Column Drain or Slow Drain Test is acceptable for compliance to Rule 27/CSD-1.
Note *4: When testing boiler safety/relief valves Use Caution-Steam Temperatures can be up to 220-250 F.
Note *5: Some burner configurations have a Pre-Purge/Pilot/Main Flame/Post Purge Cycle(s).

*****Always Use Caution When Operating Boiler Safety Devices and Controls*****



Doc 5

CSD-1
TEST REPORT

DATE: 9-27-05.

JOB#

CUSTOMER: Muskegon Christian Elementary.

ADDRESS: 1220 EAST Gate Muskegon MI 49442

PHONE

DATE BOILER # M R3512201 NATIONAL BOARD# 00990

MFG UTICA BOILER TYPE STEAM.

MODEL # J-1200BI SERIAL # AF00990

MAX WORKING PRESSURE 15 PSI OPERATING PRESSURE 2.5 PSI MIN. SAFETY/RELIEF VALVE CAPACITY 960000 Btu/hr

FUEL NAT HEATING SURFACE Mod Cast HORSEPOWER DATE OF MFG 1989

= SATISFACTORY U = UNSATISFACTORY NE = NOT EQUIPPED NA = NOT APPLICABLE R = RECOMMENDED

	MANUFACTURER	SET POINT	TEST
OPERATING LIMIT PSIF	HONEYWELL PA404A 1009	.5	S
HIGH LIMIT MANUAL	RESET Auto HONEYWELL PA404A 1033	2.5	S
MODULATION CONTROL			NE
LOW FIRE HOLD			NE
HIGH FUEL PRESSURE			NE
LOW FUEL PRESSURE			NE
COMBUSTION AIR FLOW	OPEN LOOPER.		S

	MANUFACTURER	SET POINT	TEST
SAFETY-RELIEF VALVES (S)	CONDOR 1210 Btu/hr.	15 psi	S

	MANUFACTURER	TEST
MAIN AUTO FUEL VALVE		NE
AUTO FUEL VALVE	(3) HONEYWELL 30608	S
VENT VALVE/PIPING		NE
LOT AUTO VALVE		NE
LOW WATER CUTOFF	MANUAL RESET Auto MCDOWELL MILLER #150	S
SECONDARY LWCO	MANUAL RESET Auto MCDOWELL MILLER #67	S
REL VALVE PROOF OF CLOSURE		NE
LOW DAMPER RETURN		NE
HIGH PURGE SWITCH		NE
FLAME SAFEGUARD	Relification then Burns Ground.	NE
FLAME DETECTOR	" SPARK IGNITION.	S

CONDITION OF ROOM:

COMBUSTION: good Mod #1 75-Coppm O₂ 8 Mod #2 72-Coppm O₂ 9 Mod #3 60-Coppm O₂ 9.7.

COMMENTS: POSSIBLE TEKMAR Control - Staging Boilers - Keep Monthly Log up

AUTHORIZED SERVICE TECHNICIAN

DATE

LASCKO PLUMBING & MECHANICAL

Doc 6

Daily Service Report

Project Mush. Christ. Elem.

Date 10-6-07

Job Number _____
Job Description Start up steam boiler.

Job Phone # _____

Customer P.O. # _____

NAME	STR	OT	RATE	QTY.	MATERIALS	UNIT COST	TOTAL
Tim Seidel	2				<u>Ø</u>		
<p><u>Low water cut off had a air bubble in it bled off unit fired-up</u></p> <p><u>1 Macathon pump on lower condensate tank needs to be replaced, and sump pump in hole needs to be replaced</u></p> <p><u>Unit is up to temp and cycling on cut in cut out.</u></p> <p><u>pump part # NO-DMD-005</u> <u>Need to quote the sump pump replacement</u></p> <p><u>M# 90M56C34D 200H P.</u></p> <p><u>Same as we ordered before</u></p>							

TOTAL HOURS: STR _____ T/H _____ DBL _____

TOTAL MATERIALS: _____

AUTHORIZED

SIGNATURE: [Signature]

TOTAL EQUIP/TRUCK RENTAL: _____

TOTAL LABOR: 188.

OTHER: _____

TECHNICIAN: Tim

TOTAL AMOUNT DUE 100.



Muskegon Christian School

Our mission is to provide academic excellence with a Christian perspective
to prepare each student for a lifetime of Christian discipleship.

Robert Aben Jr.
Boiler Division
PO Box 30254
Lansing, MI 48909

Dear Mr. Aben,

I am requesting a copy of the Accident Investigation Report for our boiler (#357270) located at 1220 Eastgate, Muskegon Michigan, 49442. The inspector who visited our facility is Jim Hufnagel. Because of some issues with the configuration of our boiler and the work that needed to be done, I am requesting a copy of the report for our records.

Thank you for your consideration in this matter.

Sincerely,

Dan DeKam
Administrator
Muskegon Christian School

Accident Report - Boiler or Pressure Vessel

Michigan Department of Labor & Economic Growth

Bureau of Construction Codes & Fire Safety

Boiler Division

P.O. Box 30254, Lansing, MI 48909

(517) 241-9334

ACCIDENT DATE

1-20-07

- ☐ Boiler Explosion
☐ Furnace Explosion
☒ Dry Fired
☐ Other (explain)

Authority: 1966 PA 230
Completion: Mandatory
Penalty: None

The Department of Labor & Economic Growth will not discriminate against any individual or group because of race, sex, religion, age, national origin, color, marital status, disability, or political belief. If you need help with reading, writing, hearing, etc., under the Americans with Disabilities Act, you may make your needs known to this agency.

Mail original copy of accident report to the address listed above.

Boiler Information

BOILER LOCATION				
HORIZON ENTERPRISES INC.				
ADDRESS		CITY	STATE	ZIP CODE
20600 EUREKA RD		TAYLOR	MI	48180
OWNER NAME				
SAULE				
ADDRESS		CITY	STATE	ZIP CODE
20600 EUREKA RD STE 300		SAULE		
BOILER CONSTRUCTION		BOILER TYPE		
<input checked="" type="checkbox"/> WELD <input type="checkbox"/> RIVET <input type="checkbox"/> LAP <input type="checkbox"/> MECHANICAL ASSEMBLY		<input type="checkbox"/> FT <input checked="" type="checkbox"/> WT <input type="checkbox"/> CAST <input type="checkbox"/> OTHER		
BOILER MANUFACTURER				
BRYAN				
STATE NUMBER	MFG. SERIAL NUMBER	NATIONAL BOARD NUMBER	MAWP	YEAR BUILT
MR 30-250	35703		15 PSI	1971
SAFETY / RELIEF VALVE INSTALLED		SET PRESSURE	ASME / NB STAMPED	CAPACITY
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		15 PSI / 1000	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	1200
BOILER USED FOR				
<input type="checkbox"/> POWER <input type="checkbox"/> PROCESS <input checked="" type="checkbox"/> STEAM HEATING <input type="checkbox"/> HWM <input type="checkbox"/> HWS <input type="checkbox"/> OTHER (Specify)				
CSD-1 TESTING		CSD-1 TEST LAST PERFORMED	BY WHOM	BTU / HR INPUT
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> NA		UNKNOWN		2,450,000
IS CERTIFICATE CURRENT			EXPIRATION DATE	
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			3/11/07	
DOES JURISDICTION REQUIRE LICENSED OPERATOR			WERE OPERATORS LICENSED	
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
TYPE OF BUSINESS WHERE USED		NUMBER KILLED	NUMBER INJURED	
OFFICE BLDG		0	0	

Personal Injury

NAME OF PERSON INJURED	NAME OF PERSON INJURED
ADDRESS OF PERSON INJURED	ADDRESS OF PERSON INJURED
EXTENT OF INJURY	EXTENT OF INJURY
HOSPITALIZED	HOSPITALIZED
<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO

Witnesses Interviewed

NAME	ADDRESS	CITY	STATE	ZIP CODE
NAME	ADDRESS	CITY	STATE	ZIP CODE
NAME	ADDRESS	CITY	STATE	ZIP CODE

RECEIVED

FEB - 1 2007

Boiler Division

Accident

PROPERTY DAMAGE (Be specific. Include dollar amounts. Attach a separate page if necessary)

BOILER DAMAGE ONLY, EXTENT UNKNOWN AT THIS TIME.

TYPE OF ACCIDENT (Explosion, Dry Fired, Rupture, etc.)

DRY FIRED/RUPTURE

DESCRIBE THE CAUSE AND EVENTS WHICH PRECEDED THE ACCIDENT. DESCRIBE IN DETAIL THE EXTENT AND PARTS DAMAGED.

LINE TO BOTTOM OF LWCO'S PLUGGED GIVING A FALSE WATER LEVEL IN FLOAT CHAMBERS, RESULTING IN DRY FIRE TO BOILER. 100% TUBES DAMAGED UNKNOWN DAMAGE TO HEADERS, FLOAT CHAMBERS CLEAR.

DAMAGE TO BOILER

SEE ABOVE

CAN BOILER BE REPAIRED

☐ YES ☒ NO
REPAIR PERMIT REQUIRED

OWNER MAY INSTALL NEW UNIT

☐ YES ☐ NO

WERE DAMAGED PARTS EXAMINED

☒ YES ☐ NO IF NO, WHY

BASED ON YOUR INVESTIGATION, PLEASE PROVIDE YOUR OPINION OF THE CAUSE OF ACCIDENT

LACK OF PROPER MAINTENANCE AND TESTING

INSPECTOR'S RECOMMENDATION

ANNUAL CSD-1 TESTING AND MONTHLY TESTING OF CONTROLS & SAFETY DEVICES

WHAT HAS BEEN DONE OR WILL BE DONE TO PREVENT RECURRENCE OF LIKE OR SIMILAR FAILURES

NOTHING AT THIS TIME

Other Investigative Agencies

WERE OTHER INVESTIGATIVE AGENCIES INTERVIEWED		IS A REPORT AVAILABLE		WERE PHOTOGRAPHS TAKEN		ARE PHOTOGRAPHS ATTACHED TO REPORT	
NAME	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	ADDRESS	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	CITY	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	STATE	ZIP CODE
NAME		ADDRESS		CITY		STATE	ZIP CODE

Inspector NAME OF INSPECTOR	LICENSE NUMBER	DATE OF REPORT
<i>[Signature]</i>	0946	1-29-2007

Boiler:: R306250 Address: 20600 EUREKA RD-TAYLOR 82
Status: ACTIVE OWNER: HORIZON PROPERTIES LLC
Date: 01/01/1971 Back Stop ☐

First Inspection Information

First Inspection Date: / / Date Installed: 01/01/1971
Boiler Use: STEAM Steam Heating Boiler
Other #: 4975 Code: 1 (1=NB, 2=MFG)
Pressure Allowed: 15 S V Pressure: 15
Insurer Number: 497 TRAVELERS INDEMNITY CO
Inspector Number: 301067 PAQUITO A LOPEZ NB Commission Number 0
Owner Name: HORIZON PROPERTIES LLC
Business Nature: OFFICE BLDG
Specific Location: PENTHOUSE County: 82 WAYNE
Construction Type: 1 (1=Wld, 2=Rvt, 3=Lap, 4=Mech) Boiler Type: 2 (1=FT, 2=WT, 3=CI, 4=Other)
Manufacturer: BRYAN Year Built: 1971
Fuel Type: GAS Method of Firing: AUTO Pressure Gage(Y/N): Y
Low Water Cutoff: FLOAT With Manhole(Y/N): N
Power Boiler Surface: 0 Heat Surface: (1=Stamped, 2=Computed)
MRSVC Based On: 1 (1=Stamp, 2=BTU, 3=Grate Area) LBS/BTU: L Total LBS/BTU: L
Max Design Steaming Cap: 2,960 MRSVC: 2,960 Total Cap SVC: 3,800
Permit #: Permit Type:
Contact Person: Phone:
Contractor License#: Class:

Boiler:: R306250 Address: 20600 EUREKA RD-TAYLOR 82
Status: ACTIVE OWNER: HORIZON PROPERTIES LLC
Date: 01/01/1971 Back Stop ☐

Inspection Information

Current Inspection Information (Invoice/Certificate O=Own, L=Loc)
Date: 03/11/2005 Mail Code: 3 (1=O/L, 2=L/O, 3=O/O, 4=L/L)
Batch #: R 05076 Boiler IAB: (I or Blank) Class: MC-3 Boiler Status: ACTIVE
Multiple: N Issue Invoice: Y Inspection Cycle: 2 Bill Ins:
Rule 27 - Test Procedure(Y/N/NA): Y !
Int/Ext: 2 (1=Internal, 2=External)
LBS/BTU: L (L=LBS, B=BTU)
Total Cap SVC: 0
Inspector #: 301067 PAQUITO A LOPEZ
NB Commission Number: 0
Insurance Co #: 1 STATE OF MICHIGAN
Invoice#: BLR0560224
Next Inspection Due: 03/11/2007
Rule 507 Inspection: / /
Next Rule 507 Due: 2001
S V Pressure: 15
Pressure Allowed: 15
Max Design Steaming Cap: 2,960
MRSVC: 2,960
BTU/HR Input: 1,960,000

Inspection Information

Date	Rule 27	MC	IAB	I/E	L/B	Total Cap SVC	Insp #	Ins Co #	Invoice #	Batch #
01/27/2003	Y	3		2	L	3,800	301067	497	BLR0493797	R3043D
03/19/2001	Y	3		2	L	3,600	301067	200	BLR0429594	1095GA
04/21/1999		3		3	L	3,600	301057	1		9119GB
/ /		0		0		0	0	0		
/ /		0		0		0	0	0		

Permit #: RP037339 Address: 20600 EUREKA ROAD-TAYLOR 82
Status: CLOSED BLRINSTALL: DEZIO DONALD
Date: 03/01/2007

Back Stop

Boiler Permit Information

Permit Type: INS Installation Permit
Boiler Use: STEAM Steam Heating Boiler
Construction Type: 4 (1=Welded, 2=Rivited, 3=Lap, 4=Mech)
Owner Name: HORIZON PROPERTIES County: 82 WAYNE
Contractor License#: 314213 Class: 4B Violation:
Contact Person: REGAN HAMILTON Phone: 734 285-6000 x 21
Boiler Number: 416538
Manufacturer: PEERLESS Permit Status: CLOSED
Maximum Pressure: 50 Applied: 03/01/2007
Other #: Code: 0 (1=NB, 2=MFG) Issued: 03/01/2007
Inspector Number: 301065 ROBERT THOMPSON Complete: 06/11/2007
Insurer Number: 1 STATE OF MICHIGAN
Business Nature:
Specific Location:
Boiler Type: 3 (1=FT, 2=WT, 3=Cl, 4=Other)
LBS/BTU: B MSVC: 2,464,000
Permit Fee: \$60.00
Additional Fees: \$0.00
Total All Fees: \$60.00
Payments Rcvd: \$60.00
Balance Due: \$0.00

Boiler #: R416538 Address: 20600 EUREKA ROAD-TAYLOR 82
Status: ACTIVE OWNER: HORIZON ENTERPRISES INC
Date: 06/12/2007

Back Stop

First Inspection Information

First Inspection Date: 05/25/2007 Date Installed: 01/01/2007
Boiler Use: STEAM Steam Heating Boiler
Other #: 200702 Code: 2 (1=NB, 2=MFG)
Pressure Allowed: 15 S V Pressure: 15
Insurer Number: 1 STATE OF MICHIGAN
Inspector Number: 301065 ROBERT THOMPSON NB Commission Number 7491
Owner Name: HORIZON ENTERPRISES INC
Business Nature: OFFICE BUILDING
Specific Location: TAYLOR County: 82 WAYNE
Construction Type: 4 (1=Wld, 2=Rvt, 3=Lap, 4=Mech) Boiler Type: 3 (1=FT, 2=WT, 3=Cl, 4=Other)
Manufacturer: PEERLESS Year Built: 2007
Fuel Type: GAS Method of Firing: AUTO Pressure Gage(Y/N): Y
Low Water Cutoff: FLOAT With Manhole(Y/N): N
Power Boiler Surface: 0 Heat Surface: (1=Stamped, 2=Computed)
MRSVC Based On: 1 (1=Stamp, 2=BTU, 3=Grate Area) LBS/BTU: L Total LBS/BTU: L
Max Design Steaming Cap: 1,966 MRSVC: 1,966 Total Cap SVC: 2,500
Permit #: 037339 Permit Type: INS
Contact Person: REGAN HAMILTON Phone: 734-285-6000 EXT 21
Contractor License: 314213 Class: 4B

Boiler: R416538

Address: 20600 EUREKA ROAD-TAYLOR 82

Status: ACTIVE

OWNER: HORIZON ENTERPRISES INC

Date: 06/12/2007

[Back](#) [Stop](#) **Inspection Information**

Current Inspection Information

(Invoice/Certificate O=Own, L=Loc)

Date: 05/25/2007

Mail Code: 3 (1=O/L, 2=L/O, 3=O/O, 4=L/L)

Batch #: FIRST

Boiler IAB: (I or Blank)

Class: MC-3

Boiler Status: ACTIVE

Multiple: N

Issue Invoice: Y

Inspection Cycle: 2

Bill Ins

Rule 27 - Test Procedure(Y/N/NA): Y

Next Inspection Due: 05/24/2009

Int/Ext: 2 (1=Internal, 2=External)

Rule 507 Inspection: / /

LBS/BTU: L (L=LBS, B=BTU)

Next Rule 507 Due: 2027

Total Cap SVC: 2,500

S V Pressure: 15

Inspector #: 301065

ROBERT THOMPSON

Pressure Allowed: 15

NB Commission Number: 7491

Max Design Steaming Cap: 1,966

Insurance Co #: 497

ST PAUL TRAVELERS

MRSVC: 1,966

Invoice#: BLR0616957

BTU/HR Input: 2,464,000

Inspection Information

Date	Rule 27	MC	IAB	I/E	L/B	Total Cap SVC	Insp #	Ins Co #	Invoice #	Batch #
/ /		0		0		0	0	0		
/ /		0		0		0	0	0		
/ /		0		0		0	0	0		
/ /		0		0		0	0	0		
/ /		0		0		0	0	0		

Accident Report - Boiler or Pressure Vessel

Michigan Department of Labor & Economic Growth

Bureau of Construction Codes & Fire Safety

Boiler Division

P.O. Box 30254, Lansing, MI 48909

(517) 241-9334

ACCIDENT DATE

03/12/2007

- ☐ Boiler Explosion
☐ Furnace Explosion
☒ Dry Fired
☐ Other (explain) _____

Authority: 1965 PA 290
Completion: Mandatory
Penalty: None

The Department of Labor & Economic Growth will not discriminate against any individual or group because of race, sex, religion, age, national origin, color, marital status, disability, or political belief. If you need help with reading, writing, hearing, etc., under the Americans with Disabilities Act, you may make your needs known to this agency.

Mail original copy of accident report to the address listed above.

Boiler Information

BOILER LOCATION Coleman Middle School				
ADDRESS 991 E Railway Rd		CITY Coleman	STATE MI	ZIP CODE 48618
OWNER NAME Coleman Community Schools				
ADDRESS 991 E Railway Rd		CITY Coleman	STATE MI	ZIP CODE 48618
BOILER CONSTRUCTION <input checked="" type="checkbox"/> WELD <input type="checkbox"/> RIVET <input type="checkbox"/> LAP <input type="checkbox"/> MECHANICAL ASSEMBLY			BOILER TYPE <input checked="" type="checkbox"/> FT <input type="checkbox"/> WT <input type="checkbox"/> CAST <input type="checkbox"/> OTHER _____	
BOILER MANUFACTURER Burnham				
STATE NUMBER M 359910 M	MFG. SERIAL NUMBER	NATIONAL BOARD NUMBER 8148	MAWP 15 PSI	YEAR BUILT 1990
SAFETY / RELIEF VALVE INSTALLED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	SET PRESSURE 15 PSI	ASME / NB STAMPED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	CAPACITY 1900 lb/Hr	
BOILER USED FOR <input type="checkbox"/> POWER <input type="checkbox"/> PROCESS <input checked="" type="checkbox"/> STEAM HEATING <input type="checkbox"/> HWH <input type="checkbox"/> HWS <input type="checkbox"/> OTHER (Specify) _____				
CSD-1 TESTING <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A	CSD-1 TEST LAST PERFORMED 12/20/2006	BY WHOM Joseph M. Day Co	BTU / HR INPUT 1,797,000	
IS CERTIFICATE CURRENT <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			EXPIRATION DATE 11/19/2008	
DOES JURISDICTION REQUIRE LICENSED OPERATOR <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			WERE OPERATORS LICENSED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
TYPE OF BUSINESS WHERE USED Public School		NUMBER KILLED None	NUMBER INJURED None	

Personal Injury

NAME OF PERSON INJURED	NAME OF PERSON INJURED
ADDRESS OF PERSON INJURED	ADDRESS OF PERSON INJURED
EXTENT OF INJURY	EXTENT OF INJURY
HOSPITALIZED <input type="checkbox"/> YES <input type="checkbox"/> NO	HOSPITALIZED <input type="checkbox"/> YES <input type="checkbox"/> NO

Witnesses Interviewed

NAME Mike Huss	ADDRESS 991 E Railway Rd	CITY Coleman	STATE MI	ZIP CODE 48618
NAME	ADDRESS	CITY	STATE	ZIP CODE
NAME	ADDRESS	CITY	STATE	ZIP CODE

Accident

PROPERTY DAMAGE (Be specific. Include dollar amounts. Attach a separate page if necessary)

Both front and rear tubes, furnace tube, boiler tubes, and areas on either side of the boiler shell were overheated to the point of glowing red. Some areas of the steam pipe lagging was overheated.

TYPE OF ACCIDENT (Explosion, Dry Fired, Rupture, etc.)

Dry fired

DESCRIBE THE CAUSE AND EVENTS WHICH PRECEDED THE ACCIDENT. DESCRIBE IN DETAIL THE EXTENT AND PARTS DAMAGED.

Custodian smelled smoke in the building just before 7am. He was looking for the source while calling the Maintenance Supervisor (Mike Huss). At about 7am a high temperature alarm for the fire protection system (See attached)

DAMAGE TO BOILER

See property damage above.

CAN BOILER BE REPAIRED

☒ YES ☐ NO
REPAIR PERMIT REQUIRED

☒ YES ☐ NO

WERE DAMAGED PARTS EXAMINED

☒ YES ☐ NO IF NO, WHY

BASED ON YOUR INVESTIGATION, PLEASE PROVIDE YOUR OPINION OF THE CAUSE OF ACCIDENT

There were boiler tubes found leaking. This caused excessive raw water make rates. The raw water produced soft scale deposits in both LWF% devices. They failed to operate. (See attached)

INSPECTOR'S RECOMMENDATION

Recommend the school provide additional training to the maintenance people on correct maintenance practices for steam heating boilers.

WHAT HAS BEEN DONE OR WILL BE DONE TO PREVENT RECURRENCE OF LIKE OR SIMILAR FAILURES

The back up boiler was inspected prior to placing it in service. The front tube sheet cover was removed. The two LWF% devices were opened & inspected. No abnormal conditions were found on the water-sides.

Other Investigative Agencies

WERE OTHER INVESTIGATIVE AGENCIES INTERVIEWED	IS A REPORT AVAILABLE	WERE PHOTOGRAPHS TAKEN	ARE PHOTOGRAPHS ATTACHED TO REPORT
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
NAME	ADDRESS	CITY	STATE ZIP CODE
NAME	ADDRESS	CITY	STATE ZIP CODE

Inspector	LICENSE NUMBER	DATE OF REPORT
NAME OF INSPECTOR Daniel Ident	300920 NB # 11420	3/15/07

MICHIGAN ACCIDENT REPORT – BOILER OR PRESSURE VESSEL

Accident Date 03/12/2007 for Boiler R359910

3 of 7

DESCRIBE THE CAUSE AND EVENTS WHICH PRECEDED THE ACCIDENT (CONT)

in the building went off. The alarm was for the boiler room area. The maintenance supervisor immediately came over to the middle school and went in to the boiler room. He saw that the boiler was hot; areas on the side of the boiler were starting to glow red. Some of the nipples (clean out plugs) on the side of the boiler were starting to glow. He shut the boiler controls off and cleared the boiler room. He noticed that steam was blowing out of the piping at the top and bottom of the tank (chemical injection tank) mounted on the (right) side of the boiler.

The maintenance supervisor was in the building early that morning (about 5:30 am) and did a walk through the building. However, at that time he did not pass through the boiler room. The first teachers were in the building at around 6 AM. There were no student in the building yet. The maintenance supervisor was in the boiler room on Sunday (03/11/2007). He stopped by after church and did walk through the boiler room. Every thing was operating normally at that time.

CAUSE OF THE ACCIDENT (CONT)

Contributing to this soft scale build up was poor maintenance practices. The maintenance supervisor has had this job for about one year. He did not understand what a blowdown for removal of sludge and soft scale was. He had been draining down the LWFCO devices and testing their function, but did not realize he was suppose to open the boiler for an internal inspection until the inspector perform the external inspection in November.

The required biennial internal inspection was not performed in August 2006 when the certificate of inspection expired. The boiler inspection was not performed until November and then because of the weather on an external inspection was performed. At that time, the owner/users was ordered to have the annual CSD-1 testing performed.

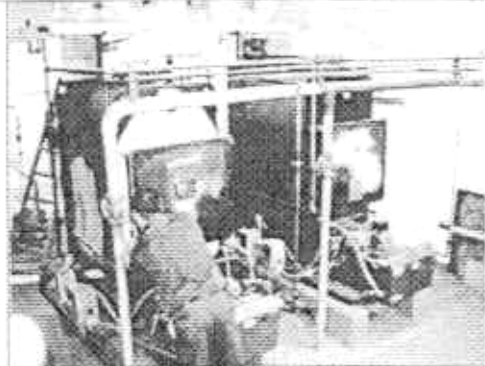
PHOTOS

Photo Description

Insert Photo Below

General area surrounding damaged equipment

- ☉ The boiler on the left (R359910) is the effected boiler
The boiler on the right (R359911) is the remaining boiler.



Damaged equipment front view

☉



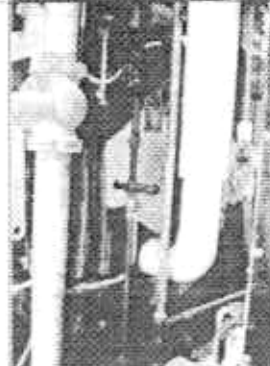
Damaged equipment left side view

☉



Damaged equipment right side view

☉



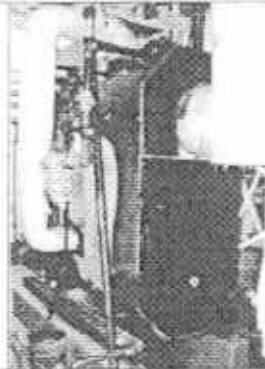
PHOTOS

Photo Description

Insert Photo Below

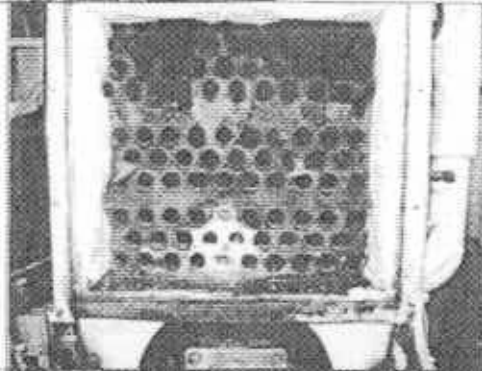
Damaged equipment rear view

☉



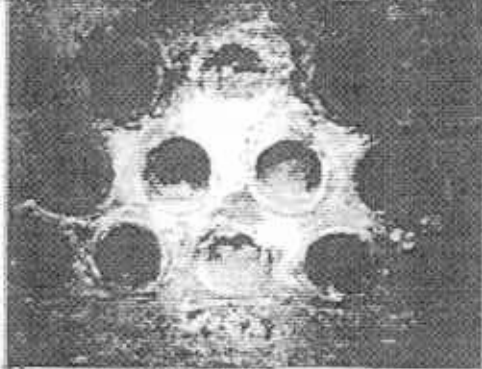
Actual damage showing specific location on equipment

☉ Front Tube Sheet (end of 2nd pass and beginning of 3rd pass)



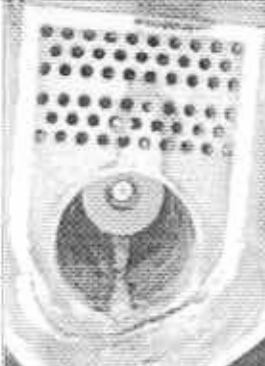
Close up detail of damage to equipment
(add as many rows as needed)

☉ Front Tube Sheet leaking tubes



Close up detail of damage to equipment
(add as many rows as needed)

☉ Lower Rear Tube Sheet and Furnace Tube (1st pass, beginning of 2nd pass)

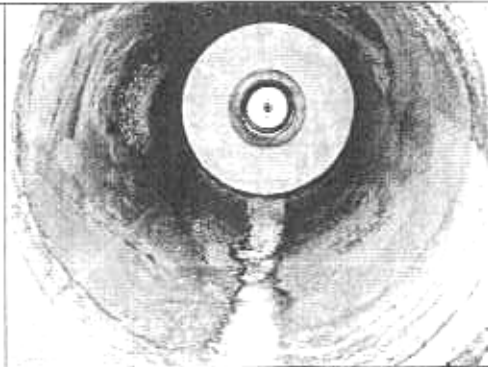


PHOTOS

Photo Description

Insert Photo Below

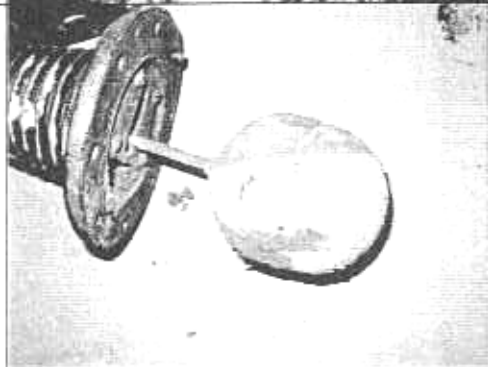
Close up detail of damage to equipment
(add as many rows as needed)
➡ Furnace Tube (1st pass). White deposits long bottom center.



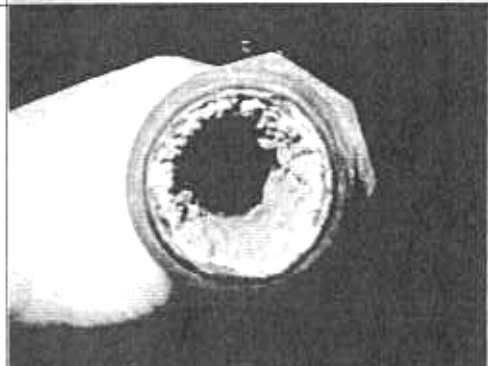
Close up detail of damage to equipment
(add as many rows as needed)
➡ Center third row (from the bottom) tube at the rear tube sheet. The crack along the length of the tube is just to the right of center on the top surface of the tube.



Close up detail of damage to equipment
(add as many rows as needed)
➡ Primary Low Water Fuel Cut Off Float



Close up detail of damage to equipment
(add as many rows as needed)
➡ Primary Low Water Fuel Cut Off drain piping.



PHOTOS

Photo Description

Insert Photo Below

Close up detail of damage to equipment
(add as many rows as needed)

- ➡ Secondary Low Water Fuel Cut Off Housing looking inside from the bottom.



Close up detail of damage to equipment
(add as many rows as needed)

- ➡ Secondary Low Water Fuel Cut Off Float (standing vertical but is normally horizontal when in use).



Boiler:: R359910

Address: 991 E RAILWAY-COLEMAN 56

Status: OUTSERV

OWNER: COLEMAN COMMUNITY SCHOOL

Date: 01/01/1990

Back Stop ☐

First Inspection Information

First Inspection Date: / /

Date Installed: 01/01/1990

Boiler Use: STEAM Steam Heating Boiler

Other #: 8148

Code: 1 (1=NB, 2=MFG)

Pressure Allowed: 15

S V Pressure: 15

Insurer Number: 1

HARTFORD STEAM BOILER

Inspector Number: 301062

JERRY KESON

NB Commission Number 0

Owner Name: COLEMAN COMMUNITY SCHOOL

Business Nature: SCHOOL

Specific Location:

County: 56 MIDLAND

Construction Type: 1 (1=Wld, 2=Rvt, 3=Lap, 4=Mech)

Boiler Type: 1 (1=FT, 2=WT, 3=CI, 4=Other)

Manufacturer: BURNHAM

Year Built: 1990

Fuel Type: GAS

Method of Firing: AUTO

Pressure Gage(Y/N): Y

Low Water Cutoff: FLOAT

With Manhole(Y/N): N

Power Boiler Surface: 0

Heat Surface: (1=Stamped, 2=Computed)

MRSVC Based On: 1 (1=Stamp, 2=BTU, 3=Grate Area)

LBS/BTU: L

Total LBS/BTU: L

Max Design Steaming Cap: 1,797

MRSVC: 1,797

Total Cap SVC: 1,900

Permit #:

Permit Type:

Contact Person:

Phone:

Contractor License:

Class:

Boiler: R359910
Status: OUTSERV
Date: 01/01/1990

Address: 991 E RAILWAY-COLEMAN 56
OWNER: COLEMAN COMMUNITY SCHOOL

Back Stop

Inspection Information

Current Inspection Information (Invoice/Certificate O=Own, L=Loc)

Date: 11/20/2006 Mail Code: 3 (1=O/L, 2=L/O, 3=O/O, 4=L/L)
Batch #: REINSP Boiler IAB: (I or Blank) Class: MC-3 Boiler Status: OUTSERV
Multiple: N Issue Invoice: Y Inspection Cycle: 2 Bill Ins
Rule 27 - Test Procedure(Y/N/NA): Y Int/Ext: 2 (1=Internal, 2=External)
LBS/BTU: L (L=LBS, B=BTU) Rule 507 Inspection: / /
Next Rule 507 Due: 2020
Total Cap SVC: 1,900 S V Pressure: 15
Inspector #: 300920 DAVID L HUNT Pressure Allowed: 15
NB Commission Number: 11420 Max Design Steaming Cap: 1,797
Insurance Co #: 1 STATE OF MICHIGAN MRSVC: 1,797
Invoice#: BLR0602794 BTU/HR Input: 1,674,000

Inspection Information

Date	Rule 27	MC	IAB	I/E	L/B	Total Cap SVC	Insp #	Ins Co #	Invoice #	Batch #
07/27/2004	Y	1		2	L	1,900	301062	1	BLR0544304	M4245
08/12/2002	Y	1		2	L	1,900	301062	1	BLR0481299	2302GC
08/18/2000	Y	1		1	L	1,900	301062	8082	BLR0411518	0256GB
08/07/1998		1		2	L	1,900	301062	1		8236GA
/ /		0		0		0	0	0		

Accident Report - Boiler or Pressure Vessel
Michigan Department of Labor & Economic Growth
Bureau of Construction Codes & Fire Safety
Boiler Division
P.O. Box 30254, Lansing, MI 48909
(517) 241-9334

ACCIDENT DATE
10/15/06
<input type="checkbox"/> Boiler Explosion <input type="checkbox"/> Furnace Explosion <input type="checkbox"/> Dry Fired <input checked="" type="checkbox"/> Other (explain) <u>CRACKING</u>

Authority: 1965 PA 290 Completion: Mandatory Penalty: None	The Department of Labor & Economic Growth will not discriminate against any individual or group because of race, sex, religion, age, national origin, color, marital status, disability, or political belief. If you need help with reading, writing, hearing, etc., under the Americans with Disabilities Act, you may make your needs known to this agency.
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Mail original copy of accident report to the address listed above.

Boiler Information

BOILER LOCATION				
THETA CHI FRATERNITY				
ADDRESS		CITY	STATE	ZIP CODE
87 Franklin Blvd		Pontiac	MI	48341
OWNER NAME				
FRATERNAL Property Management Assn.				
ADDRESS		CITY	STATE	ZIP CODE
425 N Martingale Rd Sub 100		Schaumburg	IL	60173
BOILER CONSTRUCTION		BOILER TYPE		
<input type="checkbox"/> WELD <input type="checkbox"/> RIVET <input type="checkbox"/> LAP <input checked="" type="checkbox"/> MECHANICAL ASSEMBLY		<input type="checkbox"/> FT <input type="checkbox"/> WT <input checked="" type="checkbox"/> CAST <input type="checkbox"/> OTHER		
BOILER MANUFACTURER				
Peerless				
STATE NUMBER	MFG. SERIAL NUMBER	NATIONAL BOARD NUMBER	MAWP	YEAR BUILT
M 370435	M 211A-9134-093		15	1993
SAFETY / RELIEF VALVE INSTALLED		SET PRESSURE	ASME / NB STAMPED	CAPACITY
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		15	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	643 lbm/hr
BOILER USED FOR				
<input type="checkbox"/> POWER <input type="checkbox"/> PROCESS <input checked="" type="checkbox"/> STEAM HEATING <input type="checkbox"/> HWH <input type="checkbox"/> HWS <input type="checkbox"/> OTHER (Specify)				
CSD-1 TESTING		CSD-1 TEST LAST PERFORMED	BY WHOM	BTU / HR INPUT
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A				680 000
IS CERTIFICATE CURRENT			EXPIRATION DATE	
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			10/31/1995	
DOES JURISDICTION REQUIRE LICENSED OPERATOR			WERE OPERATORS LICENSED	
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			<input type="checkbox"/> YES <input type="checkbox"/> NO	
TYPE OF BUSINESS WHERE USED		NUMBER KILLED	NUMBER INJURED	
FRATERNITY House		0	0	

Personal Injury

NAME OF PERSON INJURED	NAME OF PERSON INJURED
ADDRESS OF PERSON INJURED	ADDRESS OF PERSON INJURED
EXTENT OF INJURY	EXTENT OF INJURY
HOSPITALIZED	HOSPITALIZED
<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO

Witnesses Interviewed

NAME	ADDRESS	CITY	STATE	ZIP CODE
NAME	ADDRESS	CITY	STATE	ZIP CODE
NAME	ADDRESS	CITY	STATE	ZIP CODE

Accident

PROPERTY DAMAGE (Be specific. Include dollar amounts. Attach a separate page if necessary)

CRACK in CAST IRON Boiler with NO DAMAGE TO BUILDING OR ADJACENT EQUIPMENT

TYPE OF ACCIDENT (Explosion, Dry Fired, Rupture, etc.)

Boiler SECTION CRACKED

DESCRIBE THE CAUSE AND EVENTS WHICH PRECEDED THE ACCIDENT. DESCRIBE IN DETAIL THE EXTENT AND PARTS DAMAGED.

10/14/06 Johnson Controls TECHNICIAN RESPONDED TO A NO HEAT call Found the boiler off - cold - and low on water - THE Boiler was Filled & placed in SERVICE

10/15/06 Boiler was found leaking.

DAMAGE TO BOILER

CRACK IN ONE SECTION of the Boiler

CAN BOILER BE REPAIRED

☒ YES ☐ NO
REPAIR PERMIT REQUIRED

☒ YES ☐ NO

WERE DAMAGED PARTS EXAMINED

☒ YES ☐ NO IF NO, WHY CAST IRON SECTIONS WERE INSPECTED.

BASED ON YOUR INVESTIGATION, PLEASE PROVIDE YOUR OPINION OF THE CAUSE OF ACCIDENT

THERE IS NO EVIDENCE AT THE TIME OF THIS REPORT TO SUPPORT A DRY FIRE OR THERMAL SHOCK TO THE EFFECTED SECTION THEREFORE THE CAUSE IS UNKNOWN

INSPECTOR'S RECOMMENDATION

REPAIR / REPLACE THE Boiler - complete proper certification of the Boiler, complete CSP-1 testing

WHAT HAS BEEN DONE OR WILL BE DONE TO PREVENT RECURRENCE OF LIKE OR SIMILAR FAILURES

Proper Certification, testing & inspection of the Boiler.

Other Investigative Agencies

WERE OTHER INVESTIGATIVE AGENCIES INTERVIEWED		IS A REPORT AVAILABLE		WERE PHOTOGRAPHS TAKEN		ARE PHOTOGRAPHS ATTACHED TO REPORT	
<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES	<input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
NAME		ADDRESS		CITY		STATE ZIP CODE	
NAME		ADDRESS		CITY		STATE ZIP CODE	

Inspector

NAME OF INSPECTOR

LICENSE NUMBER

DATE OF REPORT

Kirk C McDonald

300431

11/03/06

REINSPECTION REPORT-ALL BOILERS

Michigan Department of Labor & Economic Growth
Bureau of Construction Codes & Fire Safety
Boiler Division
P.O. Box 30254, Lansing, MI 48909
(517) 241-9334
Authority: 1965 PA 290

OUTSTANDING BALANCE: 0
INVOICE NUMBER:

DATE INSPECTED: 10/30/2006 OWNER OR BATTERY NO.

BOILER NO.: R370435

OTHER NO.: 211A-04-N

NB NO.:

KIND OF INSP: ☐ INT ☒ EXT CERTIFICATE INSP.: ☐ YES ☒ NO NEXT RULE 507 DUE:

DATE RULE 507 COMPLIED:

OWNER/USER

FRATERNAL PROPERTY MGMT ASSN
425 N MARTINGALE RD, STE 1100
SCHAUMBURG, IL, 60173

LOCATION

THIETA CHI ALUMNI CORP
87 FRANKLIN BLVD
PONTIAC, 48341

RULE 27 COMPLIED: ☒ No ☐ Yes N/A
NATURE OF BUSINESS: OCCUPANCY UNKNOWN
SPECIFIC LOCATION: BASEMENT
BOILER LOCATION COUNTY: OAKLAND

USE: STEAM/HEAT
CONSTRUCTION: CAST
TYPE: CAST IRON

MANUFACTURER: PEERLESS
YEAR BUILT: 1993
YEAR INSTALLED: 1993

FUEL: NATURAL GAS
METHOD OF FIRING: BURNER

PRESSURE GAGE: ☒ YES ☐ NO
TESTED: ☐ YES ☒ NO

LOW WATER CUT OFF: FLOAT
TESTED: ☐ YES ☒ NO

507 HYDROTEST: ☐ YES ☒ NO MANHOLE: No
0 PSI

PRESSURE ALLOWED

THIS INSPECTION: 15
PREVIOUS INSPECTION:

SAFETY VALVE SET AT: 15
TESTED: ☒ YES ☐ NO

BTU/HR INPUT: 630000

POWER BOILER HEATING SURFACE:
MIN REQUIRED SAFETY VALVE RELIEFING CAPACITY BASED ON: STAMP
TOTAL CAP OF SAFETY VALVES: 643 L

MIN. S.V. REL CAP REQUIRED 504 L
IS CAPACITY ADEQUATE: ☒ YES ☐ NO

CERTIFICATE POSTED: ☒ YES ☐ NO

CERTIFICATE DUE DATE:

IS CONDITION OF BOILER SUCH THAT A CERTIFICATE MAY BE ISSUED:

YES ☒ NO (Explain fully under conditions)

CONDITIONS OF BOILER: (attach additional sheet, if necessary)

THE BOILER HAS A CRACK IN ONE SECTION AND WILL NOT HOLD WATER. There is no evidence of any csd-1 testing performed in the past. Boiler has been without a certificate of operation since 31 October 1995. Boiler is not listed on the State of Michigan Data Base.

REQUIREMENTS-OWNER/USER MUST COMPLY WITH THESE REQUIREMENTS: (ATTACH ADDITIONAL SHEET, IF NECESSARY)

Complete repairs to the boiler including ensuring that proper permits are acquired, complete hydrostatic testing, complete CSD_1 testing, complete certification inspections as conducted by the State of Michigan Boiler Division following reassembly and reinstallation of the boiler.

Alternately, remove the boiler from service and replace.

NAME AND TITLE OF PERSON TO WHOM REQUIREMENTS WERE EXPLAINED:

JOHN HORVAT (313) 745-4919

REQUIREMENTS FOLLOW UP DATE:

VIOLATIONS ISSUED:

YES ☒ NO

ORDER NO:

COMPLIANCE DATE:

I HEREBY CERTIFY THIS IS A TRUE REPORT OF MY INSPECTION.

SIGNATURE OF INSPECTOR:

LICENSE NO: 300431

COMPANY NO: 8082

NATIONAL BOARD COMMISSION NUMBER: 12479

LAST INSPECTED BY

INSPECTOR:

LICENSE NO.:

EMPLOYER:

COMPANY NAME.:

MAIL CODE: MC1

MC1=INVOICE TO O/U/CERT TO LOCATION

MC2=INVOICE TO LOCATION, CERT TO O/U

MC3=INVOICE, CERT TO O/U

MC4=INVOICE CERT TO LOCATION

The Department of Labor & Economic Growth will not discriminate against any individual or group because of race, sex, religion, age, national origin, color, marital status, disability, or political beliefs. If you need help with reading, writing, hearing, etc., under the Americans with Disabilities Act, you may make your needs known to this agency.

Boiler:: R370435 Address: 87 FRANKLIN BLVD.-PONTIAC 63
Status: ACTIVE OWNER: THETA CHI ALUMNI CORP
Date: 01/01/1993

Back Stop

First Inspection Information

First Inspection Date: / / Date Installed: 01/01/1993
Boiler Use: STEAM Steam Heating Boiler
Other #: 211A04N Code: 2 (1=NB, 2=MFG)
Pressure Allowed: 15 S V Pressure: 15
Insurer Number: 1 STATE OF MICHIGAN
Inspector Number: 301053 FELICISIMO S VILLARAMA NB Commission Number 0
Owner Name: THETA CHI ALUMNI CORP
Business Nature: FRATERNITY
Specific Location: BSMT County: 63 OAKLAND
Construction Type: (1=w/ld, 2=Rvt, 3=Lap, 4=Mech) Boiler Type: 3 (1=FT, 2=w/T, 3=Cl, 4=Other)
Manufacturer: PEERLESS Year Built: 1993
Fuel Type: GAS Method of Firing: AUTO Pressure Gage(Y/N): Y
Low Water Cutoff: FLOAT With Manhole(Y/N): N
Power Boiler Surface: 0 Heat Surface: (1=Stamped, 2=Computed)
MRSVC Based On: 1 (1=Stamp, 2=BTU, 3=Grate Area) LBS/BTU: L Total LBS/BTU: L
Max Design Steaming Cap: 0 MRSVC: 504 Total Cap SVC: 643
Permit #: Permit Type:
Contact Person: Phone:
Contractor License#: Class:

Boiler:: R370435 Address: 87 FRANKLIN BLVD.-PONTIAC 63
Status: ACTIVE OWNER: THETA CHI ALUMNI CORP
Date: 01/01/1993

Back Stop


Inspection Information

Current Inspection Information (Invoice/Certificate O=Own, L=Loc)
Date: 02/07/2007 Mail Code: 3 (1=O/L, 2=L/O, 3=O/O, 4=L/L)
Batch #: REINSTAL Boiler IAB: (I or Blank) Class: MC-3 Boiler Status: ACTIVE
Multiple: N Issue Invoice: Y Inspection Cycle: 2 Bill Ins
Rule 27 - Test Procedure(Y/N/NA): Y Int/Ext: 2 (1=Internal, 2=External)
LBS/BTU: L (L=LBS, B=BTU) Next Inspection Due: 02/06/2009
Total Cap SVC: 643 Next Rule 507 Due: 2023
Inspector #: 301053 FELICISIMO S VILLARAMA S V Pressure: 15
NB Commission Number: 9408 Pressure Allowed: 15
Insurance Co #: 8082 HARTFORD STEAM BOILER Max Design Steaming Cap: 504
Invoice#: BLR0609432 MRSVC: 504
BTU/HR Input: 630,000

Inspection Information

Date	Rule 27	MC	IAB	I/E	L/B	Total Cap SVC	Insp #	Ins Co #	Invoice #	Batch #
10/31/1995		1		2	L	643	301053	1		5335GC
/ /		0		0		0	0	0		
/ /		0		0		0	0	0		
/ /		0		0		0	0	0		
/ /		0		0		0	0	0		

Permit:	RP036237	Address:	87 FRANKLIN BOULEVARD-PONTIAC 63
Status:	ISSUED	BLRINSTALL:	LANZON AMANTE C
Date:	11/16/2006	Back Stop	

 **Boiler Permit Information**

Permit Type: Installation Permit

Boiler Use: Steam Heating Boiler

Construction Type: (1=Welded, 2=Rivited, 3=Lap, 4=Mech)

Owner Name: County: OAKLAND

Contractor License#: Class: Violation:

Contact Person: Phone:

Boiler Number:

Manufacturer: Permit Status:

Maximum Pressure: Applied:

Other #: Code: (1=NB,2=MFG) Issued:

Inspector Number: FELICISIMO S VILLARAMA Complete:

Insurer Number: STATE OF MICHIGAN

Business Nature: Permit Fee:

Specific Location: Additional Fees:

Boiler Type: (1=FT, 2=WT, 3=CI, 4=Other) Total All Fees:

LBS/BTU: MSVC: Payments Rcvd:

Balance Due:

Update

Exit

B.



JENNIFER M. GRANHOLM
GOVERNOR


STATE OF MICHIGAN
DEPARTMENT OF LABOR & ECONOMIC GROWTH
LANSING

KEITH W. COOLEY
DIRECTOR

(Document BLR2007-18)

August 22, 2007

To: Members, Board of Boiler Rules

From: 
Robert J. Aben, Jr.

Subject: Violations Issued

Attached you will find the violation reports from the National Board. The report contains violations issued in Michigan for the period of January 1 thru March 31, 2007, and the first quarter numbers for all reporting jurisdictions and the annual report. The first quarter report is based on 94 reports from 44 jurisdictions consisting of 204,549 inspections with 15,058 violations. This is a 7% violation rate.

The attached report also contains violations issued in Michigan for the period of April 1 thru June 30, 2007, and the second quarter numbers for all reporting jurisdictions. The first quarter report is based on 95 reports from 46 jurisdictions consisting of 189,787 inspections with 16,286 violations. This is a 9% violation rate.

The category showing the highest number of violations is Boiler Controls reporting 4,899 for first quarter and 4,415 for the second quarter. The second highest is Boiler Piping and Other Systems reporting 3,389 for the first quarter and 3,363 for the second quarter violations.

Providing for Michigan's Safety in the Built Environment

Bureau of Construction Codes/Boiler Division
P.O. BOX 30254 • LANSING, MICHIGAN 48909
www.michigan.gov • (517) 241-9334

Report of Violation Findings

First Quarter Report
2007

Category	Number		
1. Boiler Controls			
1.1 Low Water Cutoff/Flow Sensing Devices	1442		
1.2 Pressure Gages	485		
1.3 Water Gage Glass	314		
1.4 Pressure Controls	237		
1.5 Temperature Controls	1234		
1.6 Undefined Controls Violations	<u>1187</u>		
Total Boiler Controls Violations:	4899	Percent of Total Violations:	33%
2. Boiler Piping and Other Systems			
2.1 Main Steam System	66		
2.2 Bottom Blow/Drain Systems	219		
2.3 Feedwater, Condensate/Return Systems	874		
2.4 Expansion Tanks/Heating System Piping	476		
2.5 Casing, Stack Breaching and Flue	301		
2.6 Burners and Fuel Supply Systems	1070		
2.7 Undefined Boiler Piping/Other Systems	<u>383</u>		
Total Boiler/Other Violations:	3389	Percent of Total Violations:	23%
3. Boiler Mfg Data Report/Nameplate			
3.1 No Data Report	161		
3.2 Nameplate Stamping Incorrect/Missing	114		
3.3 Undefined MDR/Nameplate	<u>74</u>		
Total MDR Violations:	349	Percent of Total Violations:	2%
4. Boiler Components			
4.1 Fireside Water Leaks	217		
4.2 Baffles and/or Refractory	83		
4.3 Furnace and Fireside	64		
4.4 Waterside	170		
4.5 Superheaters	3		
4.6 Economizers	3		
4.7 Installation	244		
4.8 Undefined Boilers	<u>967</u>		
Total Boiler Violations:	1751	Percent of Total Violations:	12%

Category	Number		
5. Pressure Relieving Devices For Boilers			
5.1 Installation	1220		
5.2 Operation	1237		
5.3 Undefined Boilers PRDValve	<u>327</u>		
Total PRD Violations:	2784	Percent of Total Violations:	18%

6. Pressure Vessels			
6.1 Installation	392		
6.2 Material Condition	128		
6.3 PV Mfg Data Report/Nameplate	81		
6.4 PV Pressure Relieving Devices	755		
6.5 Undefined Pressure Vessel	<u>379</u>		
Total Pressure Vessel Violations:	1733	Percent of Total Violations:	12%

7. Repairs and Alterations			
7.1 Unqualified Organization	7		
7.2 Unauthorized Repair	28		
7.3 Code Deficiencies	36		
7.4 Undefined Repairs and Alterations	<u>82</u>		
Total Repairs and Alterations	153	Percent of Total Violations:	1%

8. Summary:

Number of Jurisdictional Reports This Period:	94
---	-----------

	<u>Boilers</u>	<u>PV's</u>	<u>Total</u>
Total Number of Inspections:	124,570	79,879	204,549
Total Number of Violations:	13,325	1,733	15,058
Percent of Violations per # of Inspections:	11%	2%	7%

Report of Violation Findings

Michigan

January 1 thru March 31, 2007

Category	Number		
1. Boiler Controls			
1.1 Low Water Cutoff/Flow Sensing Devices	31		
1.2 Pressure Gages	3		
1.3 Water Gage Glass	5		
1.4 Pressure Controls	5		
1.5 Temperature Controls	51		
1.6 Undefined Controls Violations	25		
Total Boiler Controls Violations:	120	Percent of Total Violations:	22%
2. Boiler Piping and Other Systems			
2.1 Main Steam System	0		
2.2 Bottom Blow/Drain Systems	20		
2.3 Feedwater, Condensate/Return Systems	2		
2.4 Expansion Tanks/Heating System Piping	22		
2.5 Casing, Stack Breaching and Flue	6		
2.6 Burners and Fuel Supply Systems	185		
2.7 Undefined Boiler Piping/Other Systems	1		
Total Boiler/Other Violations:	236	Percent of Total Violations:	43%
3. Boiler Mfg Data Report/Nameplate			
3.1 No Data Report	0		
3.2 Nameplate Stamping Incorrect/Missing	6		
3.3 Undefined MDR/Nameplate	3		
Total MDR Violations:	9	Percent of Total Violations:	2%
4. Boiler Components			
4.1 Fireside Water Leaks	1		
4.2 Baffles and/or Refractory	1		
4.3 Furnace and Fireside	0		
4.4 Waterside	1		
4.5 Superheaters	0		
4.6 Economizers	0		
4.7 Installation	85		
4.8 Undefined Boilers	2		
Total Boiler Violations:	90	Percent of Total Violations:	16%

Report of Violation Findings

Michigan
January 1 thru March 31, 2007

Category	Number		
5. Pressure Relieving Devices For Boilers			
5.1 Installation	51		
5.2 Operation	38		
5.3 Undefined Boilers PRD Valve	0		
Total PRD Violations:	89	Percent of Total Violations:	16%

6. Pressure Vessels			
6.1 Installation	0		
6.2 Material Condition	0		
6.3 PV Mfg Data Report/Nameplate	0		
6.4 PV Pressure Relieving Devices	8		
6.5 Undefined Pressure Vessel	0		
Total Pressure Vessel Violations:	8	Percent of Total Violations:	1%

7. Repairs and Alterations			
7.1 Unqualified Organization	0		
7.2 Unauthorized Repair	1		
7.3 Code Deficiencies	0		
7.4 Undefined Repairs and Alterations	0		
Total Repairs and Alterations	1	Percent of Total Violations:	0%

8. Summary:

Number of Jurisdictional Reports This Period:	3
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	<u>Boilers</u>	<u>PV's</u>	<u>Total</u>
Total Number of Inspections:	3,529	0	3,529
Total Number of Violations:	545	8	553
Percent of Violations per # of Inspections:	15%	#Div/0!	16%

Report of Violation Findings

Michigan
April 1 thru June 30, 2007

Category	Number		
1. Boiler Controls			
1.1 Low Water Cutoff/Flow Sensing Devices	29		
1.2 Pressure Gages	7		
1.3 Water Gage Glass	0		
1.4 Pressure Controls	7		
1.5 Temperature Controls	33		
1.6 Undefined Controls Violations	<u>44</u>		
Total Boiler Controls Violations:	120	Percent of Total Violations:	26%
2. Boiler Piping and Other Systems			
2.1 Main Steam System	3		
2.2 Bottom Blow/Drain Systems	6		
2.3 Feedwater, Condensate/Return Systems	1		
2.4 Expansion Tanks/Heating System Piping	19		
2.5 Casing, Stack Breaching and Flue	0		
2.6 Burners and Fuel Supply Systems	137		
2.7 Undefined Boiler Piping/Other Systems	<u>0</u>		
Total Boiler/Other Violations:	166	Percent of Total Violations:	36%
3. Boiler Mfg Data Report/Nameplate			
3.1 No Data Report	1		
3.2 Nameplate Stamping Incorrect/Missing	6		
3.3 Undefined MDR/Nameplate	1		
Total MDR Violations:	8	Percent of Total Violations:	2%
4. Boiler Components			
4.1 Fireside Water Leaks	13		
4.2 Baffles and/or Refractory	1		
4.3 Furnace and Fireside	0		
4.4 Waterside	0		
4.5 Superheaters	0		
4.6 Economizers	0		
4.7 Installation	54		
4.8 Undefined Boilers	<u>3</u>		
Total Boiler Violations:	71	Percent of Total Violations:	16%

Report of Violation Findings

Michigan
April 1 thru June 30, 2007

Category	Number		
5. Pressure Relieving Devices For Boilers			
5.1 Installation	50		
5.2 Operation	41		
5.3 Undefined Boilers PRD Valve	1		
Total PRD Violations:	92	Percent of Total Violations:	20%

6. Pressure Vessels			
6.1 Installation	0		
6.2 Material Condition	0		
6.3 PV Mfg Data Report/Nameplate	0		
6.4 PV Pressure Relieving Devices	0		
6.5 Undefined Pressure Vessel	0		
Total Pressure Vessel Violations:	0	Percent of Total Violations:	0%

7. Repairs and Alterations			
7.1 Unqualified Organization	0		
7.2 Unauthorized Repair	0		
7.3 Code Deficiencies	0		
7.4 Undefined Repairs and Alterations	0		
Total Repairs and Alterations	0	Percent of Total Violations:	0%

8. Summary:

Number of Jurisdictional Reports This Period:	3
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	<u>Boilers</u>	<u>PV's</u>	<u>Total</u>
Total Number of Inspections:	3,638	0	3,638
Total Number of Violations:	457	0	457
Percent of Violations per # of Inspections:	13%	#Num!	13%

Report of Violation Findings

Second Quarter Report
2007

Category	Number		
1. Boiler Controls			
1.1 Low Water Cutoff/Flow Sensing Devices	1292		
1.2 Pressure Gages	397		
1.3 Water Gage Glass	318		
1.4 Pressure Controls	256		
1.5 Temperature Controls	1103		
1.6 Undefined Controls Violations	<u>1049</u>		
Total Boiler Controls Violations:	4415	Percent of Total Violations:	27%
2. Boiler Piping and Other Systems			
2.1 Main Steam System	68		
2.2 Bottom Blow/Drain Systems	237		
2.3 Feedwater, Condensate/Return Systems	715		
2.4 Expansion Tanks/Heating System Piping	397		
2.5 Casing, Stack Breaching and Flue	319		
2.6 Burners and Fuel Supply Systems	1192		
2.7 Undefined Boiler Piping/Other Systems	<u>435</u>		
Total Boiler/Other Violations:	3363	Percent of Total Violations:	21%
3. Boiler Mfg Data Report/Nameplate			
3.1 No Data Report	145		
3.2 Nameplate Stamping Incorrect/Missing	112		
3.3 Undefined MDR/Nameplate	<u>40</u>		
Total MDR Violations:	297	Percent of Total Violations:	2%
4. Boiler Components			
4.1 Fireside Water Leaks	350		
4.2 Baffles and/or Refractory	173		
4.3 Furnace and Fireside	103		
4.4 Waterside	278		
4.5 Superheaters	3		
4.6 Economizers	1		
4.7 Installation	194		
4.8 Undefined Boilers	<u>1179</u>		
Total Boiler Violations:	2281	Percent of Total Violations:	14%

Category	Number		
5. Pressure Relieving Devices For Boilers			
5.1 Installation	1257		
5.2 Operation	1175		
5.3 Undefined Boilers PRDValve	<u>322</u>		
Total PRD Violations:	2754	Percent of Total Violations:	17%

6. Pressure Vessels			
6.1 Installation	1082		
6.2 Material Condition	196		
6.3 PV Mfg Data Report/Nameplate	60		
6.4 PV Pressure Relieving Devices	1189		
6.5 Undefined Pressure Vessel	<u>479</u>		
Total Pressure Vessel Violations:	3006	Percent of Total Violations:	18%

7. Repairs and Alterations			
7.1 Unqualified Organization	25		
7.2 Unauthorized Repair	55		
7.3 Code Deficiencies	12		
7.4 Undefined Repairs and Alterations	<u>78</u>		
Total Repairs and Alterations	170	Percent of Total Violations:	1%

8. Summary:

Number of Jurisdictional Reports This Period:	95
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	<u>Boilers</u>	<u>PV's</u>	<u>Total</u>
Total Number of Inspections:	115,543	74,244	189,787
Total Number of Violations:	13,280	3,006	16,286
Percent of Violations per # of Inspections:	11%	4%	9%



JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LABOR & ECONOMIC GROWTH
LANSING

KEITH W. COOLEY
DIRECTOR

(Document BLR2007-21)

August 22, 2007

To: Members, Board of Boiler Rules

From: Robert J. Aben Jr.

Subject: Chief's Report

National Board of Boiler and Pressure Vessel Inspector Board of Trustees: I was elected to the BOT as first vice chair for a term of 3 years and also to the National Board Inspection Code subcommittee on repairs and alterations. Recently I also had the displeasure of chairing a Peer Review Board for the National Board at which myself and two other chief inspectors reviewed allegations of inspector neglect against three commissioned inspectors. The board hearing involved a presentation from the investigator and testimony from the three accused, their company attorney and company officials. After five hours of testimony the board met in executive session with the National Board attorney and concluded our finding. The results: We revoked one commission, suspended one for 6 months and placed one on probation for 6 months.

Warren Truck Assembly Plant (WTAP) – Is on schedule to have all piping repairs and replacement completed by October 2007.

Boiler Fee Increases – The new fee went into effect September 4, 2007.

Boiler Failure Aboard Ship – Several meetings ago I was asked for information regarding this issue. Attached is a report released by the U. S. Coast regarding the incident.

Senate Bill SB – 651: This bill would amend the boiler act to remove the requirement for individuals installing or repairing a boiler in a location not covered by the act from the licensing requirement.

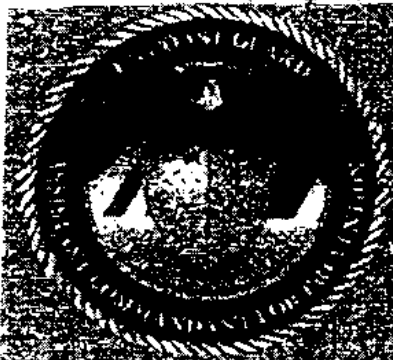
Bulletin Articles – I'm looking for suggestions on issues you believe the industry wants to hear about or needs to hear about.

Providing for Michigan's Safety in the Built Environment

Bureau of Construction Codes/Boiler Division
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1-517-241-9308

H+t: Bill Udalence



November 21, 2006
Washington, DC

Alert 5-08

Structural Integrity of Propulsion Boiler Casings

Recently a Great Lakes bulk cargo vessel suffered a boiler tube rupture resulting in a boiler casing failure which injured two crewmembers. The tube failure was not unique and the boiler casing should have contained and channeled the steam out the stack.

An investigation revealed that the structural integrity of the inboard boiler casing was compromised and the increase in internal casing pressure caused by the flashing of water into steam and its expansion caused a portion of the casing to separate, allowing the steam and a mixture of soot, refractory and other debris to be released in the vicinity of the operating station. (Attachment detail 1) Investigators discovered a number of areas where the strength of the inboard casing was compromised.

The aft inboard corner of the boiler casing is constructed of three inch angle iron which runs vertically to the top of the boiler. Attached to it are the studs which hold the dogs that secure the inboard most door of the aft side. The bottom of the vertical run should be welded to a similar piece of three inch angle iron which runs transversely across the boiler front. The transverse leg of the angle iron remained attached but the vertical leg had been cut away during a previous modification and not refastened. (Attachment detail 2)

The inboard boiler casing at the intersection of the steam drum is not permanently attached. (Attachment detail 3) The edge of the casing is fitted into a flanged expansion joint. An inner flange is welded perpendicular to the drum surface and the outer half is bolted to it. The two flanges form a slot and the outermost casing edge fits within. This arrangement allows for drum movement due to thermal expansion of boiler components without damaging the casing. It also prevents the casing from moving in any direction. For reasons unknown, about 20 inches of the aftermost edge of the casing which should have been recessed into the slot was cut away, weakening the strength of the casing. This modification combined with the fact that the corner at the upper casing between the inboard and aft casing had been cut away, left the after portion of the upper inboard casing substantially unsupported. (Attachment detail 4)

To prevent a similar casualty, the U.S. Coast Guard strongly recommends that owner operators of steam propelled vessels have their engineering staffs assess the structural integrity of their boiler casings; paying particular attention to support structure interfaces at the steam drum, front to side casing attachments and upper to lower casing transitions. It is also recommended that a thorough review of previous casing repairs be conducted to identify signs of diminished structural integrity. For U.S. flag vessels, any repairs necessitated by this assessment should be coordinated with the cognizant Officer in Charge Marine Inspection and Classification Society representatives to ensure that the equipment is reconstructed as originally designed and in accordance with good marine practice.

Questions pertaining to this safety alert may be addressed to CDR Brian Fisher of the USCG Quality Assurance Staff at brian.t.fisher@uscg.mil or Mr. Ken Olsen at kenneth.w.olsen@uscg.mil of the Office of Investigations and Analysis.

This information and the attached graphics are provided for informational purposes only and does not relieve any existing domestic or international safety requirement.

Attachment to Safety Alert 5-06

The drawing below is provided for informational purposes only and may not represent the exact boiler associated with the casualty.

